

METAPHYSICAL ESSAYS:

CONTAINING

THE PRINCIPLES

AND

FUNDAMENTAL OBJECTS

OF

THAT SCIENCE.

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PREFACE,

UNDER the name of Metaphysics are comprehended inquiries into the nature of objects impervious to the senses; such as that of the thinking principle within us, and the existence and properties of the Author of the universe. Such inquiries have at all periods in which human societies, by attaining a certain degree of civilization, afforded sufficient leisure, invited the notice of men of superior understanding, though the remoteness of these objects, from sense rendered any determination concerning them not a little difficult. Hence disagreeing opinions naturally arose, and various sects were formed. The history and various fortunes of these I shall not stop to relate, as they may be found in several well-known treatises. It is sufficient to observe here, that as each sect maintained its peculiar

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peculiar tenets with great obstinacy and ardour, Metaphysics soon became the most contentious of all sciences; whence it came to pass, that though evidently it be the most important of all others, as it relates to man, not only in his present but in his future state, announcing the truths it most concerns him to be acquainted with, yet presenting, particularly in the latter ages, little else than the incoherent jargon of the schools, it still, without attention to the numerous improvements it received during the course of the last century from the luminous researches of Locke, Berkeley, Merian, Condillac, and professor Dugald Stuart, continues to be held by the vulgar herd of mankind, to be scarce any thing more than refined nonsense.

Upon a general survey of the whole, it will be found, that many, and indeed the most futile questions and the most absurd conclusions with which this science was polluted and disgraced, originated in the vague, obscure,

scure, and ambiguous terms with which it abounded : these being partly banished, and the signification of such as it necessarily employs being duly explained, Metaphysics assumed a new appearance ; and being immediately freed from the vain unintelligible subtleties of the schools, it was enabled to unravel the more refined sophistry by which some oblique wits attempted to impose atheism, pantheism, fatalism, and materialism, and finally universal scepticism, on the credulity of mankind.

The importance of this science is best discerned by taking a summary view of the evils resulting from false notions of its objects ; and among these objects I consider settling the true import of words as one peculiarly deserving the greatest attention. Now so strangely have these been misunderstood, that abstract terms were supposed to have real corresponding archetypes. *Fortune* was thought to denote a goddess, *destiny* three goddesses ; *space*

has by some been held to be a real, self-existent Being, by others a modification of the Supreme Being (though this Being was acknowledged to be spiritual and unextended;) and by others something intermediate between matter and spirit. *Motion* was defined to be the *act* of a being tending from capacity to actuality. Others, still more absurd, have rejected definitions, even of the most complicated objects, altogether; thus rendering all reasoning on controverted subjects absolutely impossible.

With respect to the human soul, some have held it to be a portion of the Divine Being, others a bundle of fleeting perceptions without any percipient, and others a thinking machine.

But the errors into which mankind fell respecting the nature and attributes of the Divine Being were by far the most destructive of human happiness, for, to say nothing of pantheists and Epicureans, most nations ascribed to their divinities passions similar to their

their own, particularly the most malevolent, anger and revenge. And as Noah sacrificed animals after the flood, by way of thanksgiving, for having been saved from it, his misguided posterity supposed sacrifices to have an inherent power of appeasing the anger of the Divinity, and so much the greater, as the victim sacrificed was of greater value; thus the human species being deemed the most excellent, human sacrifices were held to be the most efficacious: in consequence of this fatal delusion, all nations were guilty of this horrid impiety;* and by some it was carried to an excess scarcely credible. It is said, that the Mexicans sacrificed 2500 at least, yearly.† Nor was the opinion, wantonly formed, of the existence of evil spirits let loose on mankind, much less pernicious; for on this the imaginary science of magick was founded, by

* See Magee on Atonement, p. 90; and Bryant, who published an express treatise on this subject.

† 3 Robinson, 156. 314.

means of which it was supposed communication might be held with these spirits; and to their agency, under the direction of adepts in this science, numerous disorders were ascribed. In consequence of this persuasion, its exercise was held criminal; but the means of detecting this criminality were as insufficient as ridiculous; several treatises on this subject are still extant; its belief was received in all Christian countries, and continued even after the reformation: it is said that 3000 persons suffered death as forcerers in France in one year. Many underwent the same fate in protestant Geneva, many in Germany and England, and several in New England.*

Thus we see that even the purest religion is unable to eradicate superstition; the experience of ages demonstrates, that this can be effected only by philosophy.

In the following essays I have endeavoured to comprehend the most important truths

* See Cotton Mather's History of New England.

contained in this science, with all possible conciseness. My aim in the first is to point out the true signification of terms that most frequently occur in treating metaphysical subjects, and explain the nature of objects indicated by some others. The nature of two of these was so far mistaken, and appeared so intricate, that I have treated of them more at large in distinct dissertations.

In the second I have endeavoured to do away some false opinions respecting the human soul, and particularly its materiality; shewing, that no such substance as matter is described to be, either exists or can exist. Of the unpopularity of this opinion I am well aware; however I am fully convinced of its truth; nay, that it is a most important truth; and were it even false, it can in no case be prejudicial to society, as some of its opponents, who fancied they understood it, have ignorantly supposed. I have briefly stated the answers given by its great author to the objections

jections made to it in his time, and have obviated the most plausible arguments by which it has of late been assailed. After which I succinctly treat of sensations, ideas, consciousness, the powers and faculties of the human mind, and explain in what its various abilities and disabilities consist, or at least the current notions annexed to the terms by which they are described.

The existence of the Supreme Being and his attributes, as far as they are discoverable by human reason, form the subject of the third essay. Of the former I have given a new demonstration *a priori*; and of the latter I have ventured to expose some opinions peculiar to myself, but by which many objections, otherwise insoluble, are removed.

I have every where preferred the synthetic to the analytic method, as being most consistent with brevity. The former has been successfully treated by Locke, Condillac, and professor Dugald Stuart.

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METAPHYSICKS.

METAPHYSICKS comprehend three objects of inquiry : first, The true signification of words used in treating of intellectual subjects ; secondly, A true notion of the human mind, and of its principal phenomena ; thirdly, Proper notions of the Supreme Being, and his most important attributes.

ESSAY I.

CHAPTER I.

PRELIMINARY DEFINITIONS OF TERMS THAT MOST
FREQUENTLY OCCUR IN THIS TREATISE.

Sensation denotes whatever we perceive by our senses.

Idea denotes a faint copy of a sensation absent, but recollected.

Notion signifies the knowledge we have of objects, to which we assign a name, or denote

by any sign, (such as arithmetical figures, or algebraic characters); but of which, as they are not perceived by the senses, no idea can be formed.

Thing is a word used, first, to signify whatever is not a *person*; or, secondly, any object whatsoever.

Notions are either simple, complex, complicative, significative, or relative.

Simple notions are those which we have of the characters, qualities, modes, properties, actions, or relations, singly considered, of any subject to which they belong, or of which they make a part; and hence they are said to be *abstracted*, and the knowledge we have of them is called an *abstract notion*.

Such are the notions we have of the faculties, states, or modifications of the human mind, or at least of the signification of the words that denote them.

Such also is the knowledge we have of the signification of general words, or the things signified by them, whether those words be generic or specific; as animal and man, or numerals; though most commonly these words are understood not by a knowledge of their abstract

abstract signification, but by observing to what sorts of things they are usually applied, or how formed; and hence their definition is often difficult.

Complex notions are those which we have of real things which possess many properties, and of which we can have no idea; such as *God*, to whom we ascribe many properties, and the *human soul*, to which various properties and susceptibilities belong.

Complicative notions are those which we annex to various words, indicating numerous objects bundled up together, as bearing some general relation to each other; such as numerous actions, or dispositions to action, considered in their various circumstances as objects of approbation, or disapprobation; for instance, our notions of *virtue*, *vice*, *impropriety*, *indecenty*, *right*, *wrong*, &c.

Or such as we annex to words indicating the transactions that take place in the intercourse of men with each other, as *negotiations*, *bargains*, *treaties*, *war*, *peace*, &c.

Or to those that mark the regulations of societies, as *laws* and their *sanctions*.

Or to words expressive of the combinations

of men for particular views, as *society, government, parliament, conspiracy, &c.*

Or of reciprocal relations, as *sovereign and subject, father and son, &c.*

Or to words that denote a complication of different perceptions, states, or sentiments of the mind, that bear a relation to each other; such as *desire*, which indicates, first, the perception or notion of an agreeable object; secondly, an uneasiness to attain it; and, thirdly, an act of the will determining (if it be attainable) to attain it. So *hope* indicates desire, accompanied with doubt, &c.

Significative notions are those we have of the signification of words that denote other words; as nouns, pronouns, &c. or of signs which denote words, or various particulars concerning them; as grammatical signs, or of arithmetical signs, which denote the gradation of numbers; or of algebraic signs, which denote numeral relations and operations.

Relative notions are those which we have of things not directly known, but solely by relation to something else: so, though we may not exactly know the square roots of

400 and 441, without extracting them, yet we know so much of both, by reason of the relations they bear to those numbers, that the root of the latter must be higher than that of the former.

Thus we see that *simple* notions are founded on abstraction, *complex* notions are derived from ratiocination, *complicative* from concurring relations, and *significative* on the convenience of distinction or notation.

Complicative notions are not easily defined, though easily understood in particular cases; because a definition must set forth the character common to them in all cases, which is not easily assigned, whereas, their sense in particular cases is easily understood; thus *time, place, space, &c.* are not easily defined, but the *space of a mile; in the place where Babylon stood; in an hour's time*, and such like phrases, are easily understood.

CHAPTER II.

SECT. I.

OF BEING, EXISTENCE, ESSENCE, POSSIBILITY.

1. *Being* is either a participle of the verb *to be*, or a substantive, and then it denotes any thing real and positive, actually existing, or capable of existence; but in this last case, the word possible is annexed to it, unless the sense requires that it should be so understood without this addition.

2. *Existence* denotes the actual possession of any properties; a being that possesses no properties is a mere *nothing*, and whatever possesses a property exists.

3. *Essence* denotes that constitution that makes or determines a thing to be what it is, or that assemblage of properties which distinguishes it from all other beings, and entitles it to a distinct name.

4. Thus it denotes one or other of two things, namely, a peculiar constitution, or a peculiar assemblage of properties. The peculiar constitution is called the *real essence*, but

as this is for the most part unknown, the assemblage of peculiar and inseparable properties is substituted in its stead, as it equally answers every purpose of designation and discrimination, and is called the *nominal* essence.

5. Thus the real essence of water consists in the union of certain proportions of oxygen and hydrogen; but its nominal essence consists in the aggregate of all its properties.

6. The essence of complicative notions consists in those characters that form their peculiar distinction, and are therefore marked by distinct names; thus homicide, committed through malice, is distinguished from that committed through sudden passion: the first is called *murder*, and the other *manslaughter*, and those distinct characters form their essence. As these notions are combinations formed by men themselves, their real and nominal essence is the same.—Locke, B. iii. C. v. sec. 14.

7. *Possibility* denotes the compatibility of the constituent principles of any thing with each other, or of the properties, modifications, or attributes of a thing with each other, and with that thing to which they

belong, or are attributed; and also the existence of a cause able to produce the thing which is said to be possible. Possibility is an attribute or denomination, and not a property.

8. Hence possibility expresses two notions: first, the compatibility of the principles, properties, &c. and this is called the internal, intrinsic, metaphysical, absolute, and abstract possibility, as it is considered abstractedly from the cause or causes of its production; and, secondly, the existence of a cause enabled to produce it. The second notion is called the extrinsic possibility. We may remark, that principles, properties, attributes, &c. are judged to be compatible when their incompatibility is not discerned. Thus a circle is deemed to be possible, independently of any experience, because no incompatibility can be discovered betwixt a curved line enclosing a space, and sensible equidistance of all its parts from a given point within that space.

9. The second notion relates to the power of a productive cause; and a thing is said to be *impossible*, first, when it can be effected
either

either by no power whatsoever, or, secondly, when it is inconsistent with the experienced laws of physical nature; and, thirdly, when its existence is obstructed by powerful moral causes. Thus three kinds of possibility and impossibility are distinguished—the metaphysical, the physical, and the moral.

10. First, a thing is said to be *metaphysically possible*, when it is such as may be produced or created by the Supreme Being, to whom all things are possible which do not involve a contradiction either in themselves, or to his attributes. Whatever implies a contradiction to either is *metaphysically impossible*. Thus a *square circle* implying a contradiction, cannot be formed even by Omnipotence. So God cannot create a being with a design of rendering him permanently miserable, such a design being inconsistent with his infinite goodness.

11. Secondly, an event is *physically possible*, when its existence is not inconsistent with the known laws of physical nature in the *given circumstances*, though perhaps proceeding from unknown laws. The most general laws of nature are not absolutely general, for they do
not

not extend to all bodies whatsoever, whether organic or inorganic. Thus iron will ascend to a magnet, though such ascent will be contrary to the laws of nature when other bodies are held under it. Thus bodies electrified attract many other light bodies. Thus the heads of polypi are reproducible, &c. though those of most other animals are not, &c. &c. And so we find exceptions in particular cases to most of the previously known laws of nature.

12. But an event is *physically impossible* when its existence in *given circumstances* is inconsistent with those results which uniform and universal experience has taught us to expect in similar circumstances, though possible in certain other different circumstances. Thus such experience teaches us, that pure water will not boil at the temperature of 100 degrees, though *in vacuo* it will boil at much inferior degrees; this circumstance being different from that which usually occurs, namely, the pressure of the superincumbent atmosphere.

13. An event is said to be *morally possible* when its existence is not inconsistent with those

those motives of action by which mankind are generally governed, and not opposed by causes of equal or superior efficacy.

14. And an event is *morally impossible* when, though its existence be physically possible, yet by reason of its opposition to the opinions, habits, manners, instincts, prejudices, knowledge, or ignorance, or political state of mankind, it *seldom* or never happens.

15. Hence *moral possibility* and *impossibility* are capable of degrees, but metaphysical possibility and impossibility are not.

16. Physical possibility is also capable of degrees, for an effect may be produced with more or less difficulty.

17. But physical impossibility is incapable of any degrees, since the fact that involves it is inconsistent with all the laws of physical nature. Hence all miracles are equal, each equally requiring the intervention of supernatural power, to which the production of any such fact is equally easy.

18. The possibility of *physical or moral facts* is so much the smaller, as the causes that oppose their existence are more powerful or numerous, and *vice versa*.

19. Where

19. Where many events are *apparently* equally possible, and one of them must take place, the previous assignment of any one of them renders it less possible than any other unassigned event; for the existence of the assigned event involves also the relation of conformity to the assignment, which assignment is a fact quite foreign to it; consequently, it requires the existence of two possibilities, namely, that of the event abstractedly or mathematically considered, and that of conformity with the assignment; whereas, the unassigned possible events are single and unshackled by any relation foreign to them.

20. Hence, the more numerous the unassigned possible events are, the nearer the assigned event approaches to a physical impossibility.

21. Thus the turning up of any of the six faces of a die, being *supposed* equally possible with the turning up of any other of those faces, and on casting the die, one of them must be turned up; if I name one of them, as that which must be turned up, it becomes less possible than the turning up of any other.

22. So

22. So also, and for the same reason, possibilities that involve the relations of *order* or *similarity*, are less possible than any other, and in proportion as those relations are more numerous. Thus the possibility of throwing an ace on one die, a duce on another, and a tray on a third, is smaller than the possibility of irregular appearances.

23. So the possibility of throwing three aces together with three dice, or three aces successively on the same die, is smaller than the possibility of throwing two aces, &c.

24. Yet I have said, *when the possibilities are apparently equal*, which equality in reality is never found, for the physical causes that produce any event are incapable of producing any other than that which takes place; but as these causes are unknown, every event that can by the laws of motion be produced, is judged as possible as any other: these possibilities depending on unknown causes, are called *chances*. All possibilities are eternal, and necessary in this sense,—that they are eternally known to the Divine Mind, and necessarily such as they are known to be.

SECT. II.

OF SUBSTANCE, NATURE, SUBSISTENCE, AND
PERSONALITY.

25. *Substance* in the metaphysical sense denotes the subject of various states, attributes, powers, or modifications, its essence or identity remaining the same, and to which various properties belong or are ascribed, though its *essence* be absolutely unknown. It is a being essentially perceptive.

26. The knowledge we have of it is derived from our consciousness that our mind, soul, or thinking principle, is one and the same when we feel pleasure and when we feel pain; when we grieve and when we rejoice; when we see and when we do not see; when we desire, will, or resolve; and when we judge, &c. The subject of these different states of our mind, whether active or passive, we call its *substance*.

27. The *existence* of only three sorts of substances is known to us; that of our own minds by consciousness, that of other men by analogy, that of God by ratiocination and analogy, and that of angels by revelation.

The

The existence of that substance, which is usually ascribed to the fictitious external objects of our sensations, is not only destitute of any solid proof, but absolutely impossible, as will hereafter be proved; but, in a physical sense, that is, in common language, certain aggregates of sensations, or sensible qualities comprehended under the same name, are called substances.

28. The various significations of the word *nature* I have explained in my Essay on Logic, Part. ii. Chap. v. sec. 4.

29. *To subsist*, in the English common language, and *subsister* in the French, signifies to remain, or still continue to exist. And *subsistence* in both languages signifies the nourishment necessary to support animal life.

Subsistere in classical Latin signifies to abide, to stand still, to withstand; and *metaphorically* to bear, or support. Thus Cicero says, he could not *subsistere sumptui*,* he could not bear or support the expense. *Subsistentia* is a word unknown to the classic writers.

30. In theological language, *subsistence* has a very different signification; if in truth it

* See Fabre, Thesaurus Linguae Latinae. *Sisto*.

can be said to have any at all: but to understand any part of this meaning, we must explain what theologians mean by the word *nature*.

31. *Nature*, φύσις, in the metaphysical sense, denotes the substance, οὐσία, or essence of any thing, abstractedly considered.*

32. *Subsistence* then, in the theological sense, denotes that by which a nature or substance is terminated, and completed; in which nature stops and proceeds no further; as figure terminates and circumscribes a body.†

33. Now this definition is evidently unintelligible; for nature or substance, abstractedly considered, are incapable of termination; not only because such termination is unintelligible, but because such abstractions exist only in the mind.

34. And let it be not pretended, that such a termination may nevertheless exist, though unintelligible; as essences, though unknown, nevertheless exist; for the existence of essences is known by their effects, whereas the existence of subsistences is fictitious. Hence Du-

* Petav. Dog. Theolog. Vol. III. 62.

† Du Hamel, Philosoph. adusum Ducis Burgundia, p. 294, 297.

-hamel owns that the distinction of subsistence from substance is only known to us through the mysteries of the Trinity and incarnation; that is, *ignotum per ignotius*. Tournely also allows the different significations of subsistence to be theological fictions, * and scarcely intelligible.†

35. Neither does the comparison with figure serve to illustrate this definition, for every thing corporeal must have a termination, otherwise its extension would in every sense be infinite, which is confessedly impossible; but abstractions, and spiritual substances, are incapable of any intelligible termination.

36. Sensible of the insufficiency of this definition, the scholasticks devised another: they say, that subsistence denotes the totality of a thing, abstracting from the thing of which it forms the *whole*, in opposition to a part, which subsists or is supported, only by that whole, of which it is a part; thus they say the finger, head, foot, or any other limb of the body, subsists, and is in some measure supported by the body of which it is a part; and thus they say the soul of a

* De Trinitate, p. 51.

† Ibid. p. 514.

man, singly taken, does not subsist, because it is only a part of a man, and not the whole man.*

37. This definition is only a modification of the first, and equally unintelligible; for to distinguish the *totality* of a thing, from the *whole* of a thing, is a vain attempt to abstract where there can be no abstraction; for who can abstract the totality of a thing from the whole of a thing? And, since it cannot be abstracted, how can it be opposed to a part, or to any thing whatsoever? In one of the examples, *subsist* is used as synonymous to exist; in the other, it either contradicts this sense, or has no meaning: thus when it is said that the finger, or other limb, subsists in the body, the meaning is, that it exists in or forms a part of the body, and is so far supported by it, as it is connected with it: but when it is said, that the soul of a man, singly taken, does not *subsist*, this means either that it does not exist, or else it means nothing intelligible.

38. The signification of subsistence being so obscure, it is not surprising, that theologians and the metaphysicians, who admit it, should

* Du Hamel, p. 294. 297. Segui Metaph. 79. Tournely de Trinitate, 515.

disagree in explaining what sort of thing it is; nor is an account of their opinions idle or superfluous, as upon some or other of them, doctrines of great importance have been founded, for denying of which, thousands have been deprived of their lives or properties: though these opinions are so glaringly absurd, that barely to state them is sufficient to refute them.

39. First, then some assert, that subsistence is the mere negation or absence of union with any other substance; if so, it is merely nothing, and requires no particular name, for every one sufficiently understands that things that are not united, are not united, and negations exist only in the mind.

40. Secondly, others will have subsistence to be a particular mode, or entity, rendering one substance naturally incommunicable to another substance. Such entities are evidently unintelligible and fictitious.

41. *Person*, in the common English language, is taken either absolutely or relatively.

42. When taken absolutely, it denotes, as Mr. Locke observes, “ a thinking intelligent
C 2
being

being that has reason and reflection, and can consider itself, as itself, in different times and places."* Thus a person may be the same substance but not the same person: thus a child just born cannot be called a person, at least not the same person as when of the age of ten years, though he is the same substance at both periods; hence, brute animals are not persons; nor is a madman while mad, nor an idiot, nor a drunken man while drunk.

43. When taken relatively, it denotes also an intelligent agent, considered in different relations or characters, whether real or fictitious.

44. *Real*, as when we say, that the same man may be considered as a different person in private life, from what he is in a public station; thus he may be a good judge but a bad husband. Thus Sir Walter Rawleigh, in his preface to the History of the World, towards the end, says, that "some persons, by reason of their subjection to their private passions, may seem different persons in one and the same day."

45. *Fictitious*, as when an actor assumes and

* Book. ii. Chap. xxvii. sec. 9.

represents the person of another, whom he is therefore said to personate.

46. In the classic Latin and Greek languages, the word person seems not to have the absolute sense it has in modern languages, but rather the relative, referring to the office, condition, appearance, or character, whether real or assumed. Thus Cicero says, “Sustineo
“unus tres personas, meam, adversarii, judicis”.
And “partes lenitatis semper egi libenter,
“severitatis personam non appetivi, sed a re-
“publica impositam sustinui.” And “ad eam
“rationem Satis aptam esse existimabam
“naturam et personam meam.” So Livy
says “alienam ferre personam.” And Corn.
Nepos “non dubito fore qui hoc genus scri-
“bendi non satis dignum summorum vi-
“rorum personis judicent.”

So in the Greek, *Προσωπον* denotes only *face*, or external *appearance*, even in the New Testament.

Dr. Doddridge distinguishes three senses of the word person: * “The word person (he
“says) commonly signifies one single intel-
“ligent voluntary agent, or conscious being;

* Lectures, Part vii. p. 169.

“ and this we call the *philosophical* sense of the
 “ word; but, in a *political* sense, it may
 “ express the different relations supported by
 “ the same philosophical person, v. gr. the
 “ same man may be father, son, husband,
 “ &c.; and the same prince King of Great
 “ Britain, duke of Brunswick, and treasurer
 “ of the empire, &c.”

He adds, “ besides this, some have given
 “ various definitions of *person* in the *theological*
 “ sense, of which few are more remarkable
 “ than that of Marcus, that personality is a
 “ positive mode of being, ultimately ter-
 “ minating and filling a substantial nature,
 “ and giving to it incommunicability.”
 But Marcus is not singular; he agrees with
 those metaphysicians who assert subsistence
 to be a mode; and in fact it is the same
 thing as subsistence, as already seen.

47. The notion most generally received,
 however, agrees with that of Locke; Boetius
 defines it, “ *natura rationalis individua sub-*
stantia;” with whom Aquinas agrees; and
 Tournely de Trinitate, 513; and many others,
 whom it is needless to quote. Their notion
 of

of personality I shall pass over, as in general it is the same as their notion of subsistence.

48. The best definition of personality is that of Dr. Paley, in his Natural Theology, chap. 23. p. 439: "the capacities of contriving, designing, and reasoning, constitute personality, for they imply consciousness and thought." I have added *reasoning*, else brute animals might be called persons; many allow them thought, but no one calls them *persons*.

SECT. III.

OF MODE. PROPERTY, QUALITY, ACCIDENT.

49. *Mode* is that state, whether of body or mind, which may be acquired or changed without loss of the identity of either; to *modify* is to induce such a change.

50. The *modes of a body*, are either internal or external; both, are the body itself standing in particular relations. The internal (so Locke, B. ii. C. 13, sec. 5,) consist in the relation of the parts of a body to each other, either with respect to situation, mobility, motion, or quiet. Such are figure, solidity, liquidity,

liquidity, volatility, fluidity, rarefaction, and condensation.

51. The external are the relations of a body to other bodies, such as motion or quiet.

52. *The modes of mind* are the mind itself, either *acting*, as when it judges or wills, or is *acted upon*, and therefore passive, as in its sensations and other perceptions.

53. As no mode can exist without a being, of which it is a mode, so no being can exist without a mode: hence modes cannot be called beings, but modes or states of beings; thus, pain cannot be considered abstractedly from the being that suffers it; bodies must have some figure, and the mind some perception.

54. *Property* denotes something belonging to a substance or mode, or derived from its nature and constitution; thus language is a property of the human species, and to contain most space under the smallest surface, is the property of a circle.

55. All properties are either *powers*, or *susceptibilities*; these are frequently called powers, or passive powers, and the former active.

56. First, *powers*: thus it is a property of acids to redden certain vegetable blues, of animals to breath, &c. Secondly, *susceptibilities*: thus it is a property of iron to be attracted by a magnet, or to receive the magnetic power.

57. Properties are also either *essential* or *contingent*.

58. Essential, as those that contribute to form the nominal essence, when they are singly considered. Thus *attractibility by the magnet* is an essential property of iron, it being one of those properties that enter into the definition of that metal, and which form its nominal essence. So *eternity* is essential to the Divine Being, flowing from the necessity of his existence. So truth or falsehood are essential properties, or qualities, of an affirmative proposition.

59. Again, essential properties are either *universal*, *generic*, *specific*, or *individual*. *Universal*, are those which are found in all bodies, as *gravitation*, except perhaps caloric, or light. *Generic*, as those which are found in all animals. *Specific*, as those which are found only in one species of animals. *Individual*,
as

as those by which one individual is distinguished from another of the same species.

60. *Contingent*, as when a susceptibility is reduced to actuality; thus susceptibility of science is a property essential to man, but the *actual* acquisition of any science, is a property merely contingent; thus the various mental modes are contingent, as the perceptions of pleasure or pain, joy or grief; as the mind has the susceptibility of either; but perception of some kind is essential to it, as a figure of some kind to bodies.

61. The scholastic distinction of properties should not be entirely overlooked; relatively to a species, scholastics distinguish four sorts.

First, properties *that belong to a whole species, but not to that species alone*: thus, to have two eyes, is a property of the human species, but not of the human species singly; for many other species of animals have also two eyes: these I have called generic properties, some however are not generic; thus to have two legs is a property of the human species, but not of the human species alone, for it belongs also to birds.

Secondly, properties *that are found only in one species, but not in all the individuals*
of

of that species; as a genius, or disposition, for poetry, or musical composition, &c.

Thirdly, properties that are found in a whole species; and solely in that species, but not always; thus to reason is a property of the human species, and of the human species singly; yet men cannot reason when asleep, intoxicated, delirious, or in a violent passion, &c.

Fourthly, properties that belong to a single species only, and at all times; as the power of speech, which belongs to the human species only, and can speak even when asleep.

62. *Qualities*, as they are differently applied, denote either sensations or relations; for they are *physical*, *intellectual*, or *moral*.

63. By physical qualities, Mr. Locke, (B. ii. C. viii. sec. 7. 8, 9, and 10.) understands, powers which certain bodies have (as he says) of exciting perceptions: these he distinguishes into primary and secondary qualities; the primary are extension, solidity, mobility, and figure; the secondary are colours, sounds, tastes, and smells; but in fact these qualities are mere sensations: the tactile, are not the qualities of any thing, but form and constitute bodies:

bodies : the visual, audible, sapid and odorous, form the secondary qualities, which are properly qualities, as they denote and accompany the former, but do not constitute them, as will be shewn in the sequel. Secondary qualities, are those that are referred to tangible sensations, as colour, &c. Primary are those which are referred to no other ; as the tangible sensations of extension and solidity.

64. *Intellectual* qualities denote the various degrees in which intellectual powers are possessed, as sagacity, penetration, comprehension, discernment, &c.

65. *Moral* qualities denote the relations which certain objects or actions have to our moral instincts, happiness, or misery.

66. *Accident* denotes, first, any thing super-added or happening to a body or substance, and which has no necessary connection with it ; thus silver is accidental to a lead ore, or antimony to a silver ore ; as lead or silver ores may well exist without such ingredients.

67. Secondly, an unforeseen event is said to be *accidental*. It differs from *chance* ; as this denotes the happening of an event, where another

another or many more are supposed equally probable. Thus the birth of a male child is said to happen by chance, because the birth of a female is supposed to be equally probable, or nearly so; but these terms are frequently confounded.

SECT. IV.

DIFFERENCE, DISTINCTION, PRIVATION, OPPOSITION.

68. *Difference*: those things are said to differ from each other, which exhibit any thing, either absolute or relative, which the other does not. Hence difference consists in the presence or absence of one or more properties, modes, qualities, relations, or accidents, which are found in one of the objects compared, and not in the others. Difference then implies the absence of similitude in all respects, or in some one respect: thus a metallic globe, and an ivory globe of the same dimensions, are similar in respect to their shape, but different in every other respect.

69. Differences are therefore either essential or nonessential. Essential differences are either transcendent, as that betwixt the Divine
vine

vine substance and any created substance; or *generic*, as the differences of created substances of different *kinds*; or *specific*, as the differences that discriminate different species of the same genus; or *nonessential*, such as the differences of modes, properties, qualities, or accidents, of individuals of the same species: for the modes, properties, or qualities, of different species differ essentially, unless abstractedly considered, and similar to each other, as a circle of iron, or of stone, or of wood.

70. *Distinction*: those things are said to be distinct whereof one is not precisely what the other is. Distinction then denotes the absence of exact identity: it must not then be confounded with difference; for two globes, or pieces of coin of the same metal, may be entirely similar, and consequently not differ in any respect from each other; but they are perfectly distinct, since they are two, and not one. Difference is opposed to similarity, distinction to sameness.

71. Distinctions are either real, modal, or mental.

72. *Real*, as the distinction between two or more substances; as the soul of one man from

from that of another man, or of angelic beings; or the modes, properties, or qualities, of distinct substances: thus the thoughts of one man, even when perfectly similar, are really distinct from those of another man.

73. *Modal*: thus the various sensations, ideas, volitions, &c. of the same mind, are not only distinct, but frequently very different; for instance, the sensations of pleasure and those of pain, or of pleasures of different sorts, or of pains of different sorts or degrees. Some have called the distinction of pleasing and painful sensations real, and justly, if they mean by *really* distinct, that they are *truly* distinct and different, and independently of the mind, but not in the sense in which the word real is usually taken; for surely they are not as distinct from each other as one man is from another, for they are merely distinct or different states of the mind. The distinction betwixt the mind and its modes is also merely modal; for mode implies a mind of which it is a mode, but mind does not imply any particular mode.

74. *Mental*, as that which exists between the powers or properties of the same mind.

Thus

Thus the power of judging is distinguished from the power of willing; the susceptibility of sensations is distinct from that of receiving ideas, or emotions, or moral impressions, &c. It is plain these powers are not *really* distinct from each other, nor from the substance of the mind; for they are the mind itself, as capable of these different exertions or impressions, and form what Locke calls its nominal essence. Nor are they *modally* distinct, for they are not states of the mind; and thence we are not conscious of possessing them, but only know by experience that we do possess them; yet they are distinct, as they relate to different objects, and have different effects: and hence their distinction is merely *mental*. One cannot exist without the other, though their exertions may be variously obstructed: this distinction is commonly called *virtual*.

75. *Negations* denote acts of the mind, denying the presence, or (in other words,) affirming the absence either of *all* beings, modes, properties, qualities, or relations, or of some *particular* mode, property, quality, or relation; which denial may be expressed with or without any reference to the subject of such

such mode, property, quality, or relation, that is, in concrete or abstract terms.

76. Thus the word *nothing* denotes a denial of all beings, modes, &c.: so *silence* denotes the absence or denial of *sound*; *blindness* the absence of the power of seeing; *darkness* the absence of light; *deafness* the absence of the power of hearing; *insipidity* the absence of taste; *widowhood* the absence of the relation to a pre-existing husband, &c. So *concrete negative words* express indefinitely the subject of the mode, property, quality, or relation, which is denied: thus *blind* denotes indefinitely an animal to whom the power of sight is denied; *deaf*, one to whom the power of hearing is denied; *widow*, a woman, to whom the relation to a pre-existing relation, a husband, is denied; *childless*, a person to whom the relation to an offspring is denied.

77. Hence negations, as such, exist only in the mind denying the existence of all beings, or of some mode, property, &c. and grounded on the nonexistence of what is so denied.

78. A *shadow* is a space, which, by reason of the intervention of an opaque body, has less light thrown upon it than is thrown on

the furrounding space, or no light at all. And yet, as Mr. Locke remarks,* the shadow is discernible, and the more discernible as less light is thrown upon it. Hence he infers, that darkness may be seen: this I do not think true. It is the enlightened circumference of the shadow, or darkened space, and not the darkness itself, which can be said to be seen, and the more distinctly seen as the space it surrounds is darker: this circumference delineates the figure of the opaque body that interrupts the light. Darkness can no more be seen than silence heard; yet both are said to be perceived, or rather judged to exist, when no light, or a comparatively moderate light, is perceived in the one case, or no sound in the other.

79. In *technical language*, the absence of modes or powers, &c. from subjects that are not capable of receiving them, are called *negations*; and their absence from subjects in which they are usually found, are called *privations*. Thus insensibility, or absence of feeling, in mineral bodies, is called a nega-

* Book ii. sec. 5, 6. Chap. viii.

tion; and blindness in animals, is called a privation.

80. *Opposition* denotes the repugnance or incompatibility of the presence and absence of the same thing at the same time. Thus existence and nonexistence are opposed to each other, and sight and blindness, &c.

81. Or, secondly, the incompatibility of different modes in the same circumstances and the same organ. Thus a figure cannot at the same time appear round and square; but a round figure may in a certain position appear elliptical, and by certain dioptrical glasses appear of a different figure: so also the same water may appear cold to a warm hand, and warm to the other colder hand.

82. Or, thirdly, the impossibility of being at once the subject and term of the same (not merely a similar) relation. Thus a man cannot be both the father and the son of the same person: and thus correlatives are opposed to each other.

SECT. V.

OF UNITY, & NUMBER, QUANTITY, INDIVIDUATION, IDEALITY,
INFINITE INDEFINITE.

83. Any thing or collection of things which cannot be divided or distinguished into more things equal to it, is called *one* or an *unit*. Thus a *man* is one, because he cannot be divided into two men: so an *army* is an unit, because it cannot be divided into two equal armies: so a kingdom is *one*, as it cannot be divided into two equal kingdoms.

84. Unity is either perfect or imperfect.

85. *Perfect* is that which is incapable of being divided into any parts whatsoever, whether equal to the whole or unequal to it. Thus God and the human soul are perfect units, as they do not consist of parts. *Single* signifies not more than one: *alone* signifies having no companion.

86. *Imperfect* units or things are combinations of things or units under *one name*, and consequently divisible into parts. Thus an *army* denotes a combination of regiments, companies, and finally of the men that compose

pose it: a *house* denotes a combination of walls, windows, rooms, chimneys, &c.: and a *city* a combination of houses, streets, lanes, &c. In a word, whatever the mind considers as *one*, that is an unit: thus *dozen*, though consisting of twelve units, is called *one* dozen, &c.

87. The parts of an imperfect unit, if of the same kind as the unit, are called fractions.

88. *Number* is defined by Euclid, a collection or assemblage of units, of the same kind or species: if of different kinds, we should rather call it a *multitude*. Any number greater than *one* is called *plurality*.

89. *Quantity* denotes any thing susceptible of increase or diminution until this increase arrives at its *maximum*, or the diminution to a *minimum*: if susceptible of exact mensuration or numeration, it is called a *perfect* quantity; if not, *imperfect*.

90. No modes (except the tactile), nor properties, qualities, or relations, are capable of *exact* mensuration, though many are susceptible of increase or diminution: their various approaches to the greatest increase or diminu-

tion (whichsoever we reckon from), are called *degrees*: some of them are indirectly mensurable by their coincidence with some tactile modes. Thus heat and cold are measurable by the space which the bodies that possess them occupy, and its proximity or distance from the *maximum* or *minimum* standard of their intensity.

91. Quantities are either connected or unconnected; the former are called *continued*, the latter *discrete*.

92. *Individual* signifies a person (or even an animal) separate or distinct from another of the same species.* Hence Locke justly infers, that the principle of individuation, or that which essentially distinguishes one individual from another, is the separate or distinct *existence* of each, † which makes one individual incommunicable to the other, in opposition to the opinion of some scholastics, who would have individuals distinguished from each other by some fictitious entity or formality super-

* A child in its mother's womb is not separate, but distinct from the mother.

† Locke, B. ii. C. xxvii. sec. 3; and Clarke's Reply to Waterland, 308.

added to each. In general, however, their distinction is notified by some accidental difference of size, shape, voice, features, &c. But even if they were perfectly similar, they would still be distinct and separate, occupying different places, and acting differently.

93. *Identity, or sameness*, in the strict sense of the word, denotes the exclusion or denial of any change in the *nature* of the thing which is said to be the same.

94. Thus a substance, for instance the human soul, is justly said to be the same when no other substance is substituted in its stead ; but a change of its modifications, as the substance itself is not altered, does not prevent it from being the same substance, or affect its identity : thus the soul this hour feeling pain, and the next hour pleasing sensations, is still the same soul ; nor is it changed by thinking on different things, &c. So a child is deemed to be the same being when a grown man : so a mode (property, quality, or relation) is deemed to be the same mode while it undergoes no alteration, for its nature is not changed ; nay, an interruption of the existence of a substance, or mode, &c. does not

prevent them from being exactly the same, when renewed, with what they were before such interruption. Thus if my soul was annihilated this day, and again created to-morrow, or next year, it would still be my soul the same, and not another: so if the pain which I may feel to-day be exactly, both in kind, and degree, and reference, such as I felt yesterday, notwithstanding any interruption, I must deem it the same, and not merely *similar*; for it is only the pain suffered by another person, and not differing from mine in either kind or degree or reference, that can be called similar.

95. I cannot, therefore, agree with Mr. Locke, (B. ii. C. xxvii. sec. 13.) in thinking identity to be a relation, either to time or to place; for these and other particulars are considered only with the view of ascertaining identity, by observing whether any change in the object has happened from the time in which it first existed or was known, or whether another had since been substituted in its place.—“ When we demand (says he), whether any thing be the same or no? it refers always to something that existed at such a
“ time.

“ time, at such a place, which it was certain
 “ at that instant was the same with itself, and
 “ no other.” How a thing can be the same
 with itself I do not well understand: it ap-
 pears to me, that the meaning of the question
 is, has the thing been changed from such a
 time? Hence he infers, “ that one thing
 “ cannot have two beginnings of existence;”
 which also appears to me a mistake; for I
 cannot think a thing to become impossible,
 merely for having once ceased to exist.

97. Concerning the identity of man,*
 Locke† inquires very minutely in what it
 consists: whether in possessing the same sub-
 stance, or the same shape? and in what cases
 he can be deemed the same person? In reply
 to these questions—

He affirms, first, ‡ that “ whoever would
 “ see a creature of his own shape and make,
 “ though it had no more reason than a cat,
 “ would still call it a man:” a common man
 would probably do so, but a philosopher, not

* I omit mentioning other animals here, as it is, at least,
 doubtful whether they are not mere automatons.

† Sec. 7.

‡ Sec. 8.

knowing its origin, would probably suspend his belief until more amply informed.

98. Secondly, he is confident that whoever would hear a cat or parrot discourse, reason, and philosophize, would still call and think it nothing more than an intelligent rational parrot. On the contrary, I am disposed to think, that, in such a case (if such can be supposed), every one would conclude that such animals were animated by a supernatural agent, and not mere cats or parrots. Thus every chymist would conclude, that a substance having all the properties of gold, except insolubility in water, was not gold.

99. Thirdly, he thinks* that “ whoever
 “ shall place the identity of man in any thing
 “ else but like that of other animals, in one
 “ fitly organized body, taken in any one in-
 “ stant, and thence continued, under one orga-
 “ nization of life, in several successively fleet-
 “ ing particles of matter united to it, will
 “ find it hard to make an embryo, one of
 “ years, mad and sober, the same man, by any
 “ supposition that will not make it possible
 “ for St. Austin and Cæsar Borgia to be the

* Sec. 6.

“same man.” On the contrary, I am certain that an embryo, gradually passing to maturer age, and whether mad or sober, would be, and always is, thought the same human being, though not called a man until of a certain age.* And it were absurd to think that St. Austin and Cæsar Borgia could by any possibility become the same man, the mental characters and dispositions of both being irreconcilably different, and no gradual transition from one to the other is supposed; but, setting aside the knowledge we have acquired from revelation, I do not think it impossible that Charles the Second and Tiberius might have been the same man.

100. Fourthly, he supposes, that though one should know that the soul of a man animated an animal of another form, for instance, the soul of Heliogabalus the body of a hog, he would not say that hog was a man. I certainly would say it was a man, in the shape of a hog, for it contained the principal part of a man, and *denominatio fit a potiori*; just as I would say, that a copper coin, so

* As the word *man* denotes not the species and sex, but also frequently a certain age.

whitened as to look like silver, was still copper, and not silver.

101. Fifthly, he proposes two questions: first, “whether, if the same substance which
“thinks be changed, it can be the same person? and, secondly, whether remaining the
“same (substance), it can be different persons?”

101. His answer to the first question, as far as it regards the system of materialists, I shall not notice, as I consider that system as purely chimerical: but, supposing immaterial substances only to think, he answers, “that this
“question can be solved only by those that
“know whether the consciousness of past actions can be transferred from one thinking
“substance to another.” He grants, “that
“were the same consciousness the same individual action, it could not; but it being
“but a present representation of a past action, why it may not be possible that that
“may be represented to have been which
“really never was, will remain to be shewn;
“and, therefore, how far the consciousness of
“past actions is annexed to any individual
“agent, so that another cannot possibly have
it,

“ it, will be hard to determine, until we
 “ know what kind of action it is that cannot
 “ be done without a reflex act of perception
 “ accompanying it. But that which we call
 “ the *same consciousness*, not being the same
 “ individual act, why one intellectual sub-
 “ stance may not have represented to it, as
 “ done by itself, what it never did, and was
 “ perhaps done by some other agent; why
 “ such a representation may not possibly be
 “ without reality, as well as several represen-
 “ tations of dreams are, will be difficult to
 “ conclude from the nature of things.* If
 “ the same consciousness can be transferred
 “ from one thinking substance to another, it
 “ will be possible that two thinking sub-
 “ stances make but one person; for the same
 “ consciousness being preserved, whether in
 “ the same or different substances, the personal
 “ identity is preserved.”

102. Here Mr. Locke seems to have mistaken the nature of consciousness, which it is therefore necessary to explain.

Every perception is the perception of some-

* Sec. 12, 13.

thing, and *by* something. Inasmuch as it refers to the thing or object perceived, it is simply called a *perception*; inasmuch as it refers to the percipient, or mind that perceives, it is called *consciousness*: perception, then, and consciousness, are not two different modifications, but one single modification, considered in distinct relations. Thus when we see any thing, colour is the *object* perceived, and mind is that by which it is perceived.

103. Besides the consciousness of our perceptions, we have also a consciousness of the *identity* of the percipient substance: thus when I see a colour, and at the same time hear a sound, I am conscious, that is, I feel and evidently know, that I am the same *self* or subject that receives these two different sensations; but of a past sensation I can have no present consciousness, for the very reason that it is past: that I had it, I know only by *memory*, and not by consciousness.*

104. In the same manner the identity of our *past* self, with our *present* self, we know

* So also Dr. Reid on the Mental Powers, Eff. iii. C. vi. p. 334, in 4to.; and Segui Log. 483.

only by memory, (the explanation of which here would be too tedious, and out of place) : now memory may be rendered inaccurate by various disorders, and is constantly so in dreams.

105. But, to return to Mr. Locke, we may remark that he here seems to forget the definition of consciousness which he had given B. ii. C. i. sec. 19. He there very properly lays it down, that *consciousness is a perception of what passes in a man's own mind*. Therefore there is no difficulty in determining whether the consciousness of past actions is annexed to any individual agent, so that another cannot possibly have it, as no agent whatsoever can have the consciousness of a past action ; but there is no doubt that a person may have his imagination so disordered, as to think himself a different person from what he really is, and may, in that case, fancy he remembers, as his own, the actions performed by that person ; thus Pythagoras, in Ovid, Metam. Lib. xv. v. 160, fancied he remembered having been Æthalides, and afterwards Euphorbus, and having been wounded at the siege of Troy, &c. This however is
not

not true memory, as shall elsewhere be shewn; much less is it consciousness; and consequently, it is impossible that two thinking substances should make but one person.

106. To the second question, “whether
“the same immaterial substance remaining,
“there may be two distinct persons?” he answers, that without having the consciousness (that is, the memory) of having been another person, though it should formerly have animated a different body, it yet cannot be deemed the same person; and, consequently, now animating a different body, it must be deemed a distinct person. But if it had the consciousness (memory) of any of its actions in a former state, it would then be the same person. And this I believe to be true, if such memory were not the effect of delirium or insanity.

107. Hence he concludes; * that personal identity consists, not in identity of substance, but in identity of consciousness. Thus Socrates asleep is not the same person as Socrates awake, and therefore it would be unjust to punish him when awake for what he did when asleep. He allows him to be the

* Sec. 1. 9.

same *man*, but not the same *person*. “ And if it
 “ were possible for the same man to have
 “ distinct incommunicable consciousnesses at
 “ different times, it is past doubt the same
 “ man would at different times make different
 “ persons; hence human laws will not punish
 “ the mad man for the sober man’s actions, nor
 “ the sober for the mad man’s.”

I should rather think that personal identity requires both identity of substance and such memory as would enable a man to consider himself as himself at different times and places, as Locke himself lays down.* Strictly speaking, indeed, a man when asleep or mad, cannot be deemed a person; because in those states he has not the use of reason; which, as Locke owns, is necessary to constitute a human being, a person; and, therefore, it would be unjust to punish him for actions committed in those states, though still the same man, having in those states neither reason nor liberty. And if it were possible for the same man to have different trains of reminiscence at different times, so as that he

* Sec. 9.

could not consider himself as the same man, though enjoying each time the use of reason I also think he may be esteemed two different persons; as, to constitute a man the same person, persuasion of identity, grounded on memory, is necessary, as well as identity of substance.

108. Identity is either physical or moral, that is, popular and apparent.

109 *Physical* identity denotes the identity of substance, or modes, as already said, N° 93. 94.

110. *Moral* identity denotes that which vegetables and animals possess, and consists in the peculiar disposition of the parts of each, appropriated to each species, and such organization of those parts, in one coherent body, as to fit them to receive nourishment. In such organization, vegetable and animal life consist: they therefore continue the *same*, as long as that life continues, though the parts be continually changed, by the loss of some and the accession of others. Thus an oak growing from a plant to a great tree, and then lopped, is still the same oak; and a colt grown up to a horse, sometimes fat, some-
times

times lean, is still the same horse, though in both cases, there is a manifest change in the parts *

111. So also unorganised bodies, that preserve the same general appearance at different times, though their parts succeed each other and are constantly changed, are, in popular language, called the *same*, and preserve the same denomination. Thus, though the water of a river is continually changed, yet while it preserves the same, or nearly the same, direction, it is called by the same name, and is esteemed the same river. So the ship of Theseus continued still to be called the same ship, when after repeated repairs there did not remain a single piece of the timber of which it had been originally built.

112. Identity is also distinguished into generic, specific, and individual: this last alone denotes true and real identity; the two former refer only to the classification of objects, and such identity is, properly speaking, only a greater or less degree of *similitude*; thus we say, that wine, in two glasses taken out of the same bottle, are the *same wine*, because

* Locke, Book ii. Chap. xxvii. sec. 3

the wine in one is in every respect similar to that in the other. But they are not exactly or *individually* the same, since one may be thrown away, and the other remain; they are only *specifically* the same.

SECT. VI.

113. *Infinite* is a term taken in three senses.

In the first, and most rigorous sense, it denotes the actual exclusion of limits from the quantity to which it is attributed: this is called an *actual infinite*.

114. In the second sense it denotes a quantity, which *can* be increased or diminished without ever arriving at the *maximum* of increase or diminution; that is, without ever arriving at a limit of either: this is called a *potential infinite*.

115. Thirdly, it denotes a quantity whose limit, whether of increase or diminution, is abstracted from, and therefore *unassignable*. This is called, a *mathematical infinite*, being a mere mathematical device to abridge and facilitate certain calculations; but no mathematician at present pretends that any quantities

tities infinitely great, or infinitely small, really exist, they being mere mental abstractions.

116. Mathematicians even speak of infinites of the second, third, and fourth order, as if the infinites of the second order were infinitely smaller than those of the first, and those of the third infinitely smaller than those of the second, &c.; but this also is a mere mathematical supposition, namely, that if the quantity x be assumed infinitely small, with respect to a given finite quantity, that is, so small that its magnitude is not assignable, the ratio of y to x may be as small with respect to x , as x is with respect to the given finite quantity; here x is taken as an infinite of the first order, and y an infinite of the second order; thus y, x, x, a ; but these are mere suppositions, not realities, like points without extension, and lines without breadth, &c.*

117. Yet Mr. Fontenelle, and some other mathematicians imagined, that numbers infinitely great, and infinitely small, really exist.

* See Encyclop. Mathem. p. 208. Mem. Berlin, 1745 p. 154. Lambert, Exposition des Principes, p. 144. 1 Leib. p. 107. 1 Philosoph. Wolfenb. 204. 205.

They are well refuted by Mr. Larriges, in the Memoirs of Berlin for 1745, and in the Encyclop. Mathem. article *Infini*. p. 208.

118 Some have defined infinite to be a quantity incapable of increase, and thus confounded it with what mathematicians call a *maximum*; but the sinus of an angle of 90° is incapable of increase, and yet it is not an infinite.

119. Wolfe defines an infinite to be that which has at once all that it can have. This, though expressed in positive terms, still expresses a negation of a limit.

120. *Substance*, as such, cannot, properly speaking, be said to be infinite, because it is not a quantity or magnitude, as Locke well remarks; but the extent to which any property reaches, or may reach, is an imperfect quantity, and therefore susceptible of *degrees*.

121. The physical and moral properties of God, as power, intelligence, knowledge, justice, mercy, goodness, &c. are alone infinite, as they are incapable of any limit.

122. A *finite* quantity is that which hath a limit: of many finite things we may have an idea, and of many only a notion. Thus we

may

may form an idea of three men, or three houses; but of a million of men, or a million houses, we have only a notion grounded on their sign: but of *infinite* we can form no idea, but only a notion founded on a judgment denying any limit,

123. Hence the idea or notion of *finite* is a positive idea, or notion grounded on a judgment asserting a limit, though that limit be undetermined and unknown; thus we say, the number of grains of sand on the sea shore is *finite*, or of blades of grass on the surface of the earth, &c. is *finite*, though we cannot determine its limit and tell what it amounts to. But the notion of *infinite* is a negative notion, barely asserting the impossibility of fixing a limit to the quantity of which it is predicated; or, to express the same thing in abstract terms, *finitude* denotes the existence of a limit; *infinitude*, the exclusion of any limit.*

124. The Cartesian philosophers think, that the notion, or as they call it the idea, of in-

* Clarke's notion of *infinite* is incorrect; see his reply to Waterland, p. 226. He confounds infinite with that to which *infinity* is attributed.

finite is positive, and that of finite negative; and they prove it by what Locke, sec. 14, calls a pleasant argument: for infinite, they say, denotes the negation of an *end*; now an end being negative, the negation of it must be positive. Locke answers very properly, that an *end* is not a bare negative; thus the end of a body, is the extremity or superficies of that body; he that perceives the end of his pen is black, will be apt to think that the end is something more than a pure negation. So the *end* of duration is properly the last moment of it, and the beginning of duration is the first moment of it.

125. But, to answer this objection more fully, it must be noted, that the words *end*, and *last*, and *limited*, are exclusive words, which import something positive, which is said to be the *end*, or the *last*, or the *limit*, and also the negation of a continuance; but *infinite* should in this case barely deny the negation of the *continuance*, but not the positive thing itself, which is said to be the end, for this continuance alone is denied, and is the only negative part; therefore, the negation would be incomplete; and from the
partial

partial negation of a thing, partly positive and partly negative, nothing positive can result.

126. *Indefinite* is a quantity which we do not, or cannot, precisely determine, though we know it to be finite: thus the number of grains of sand in the sea is indefinite. It differs from *unassignable* in this, that unassignable denotes greater or smaller than any number that *can be assigned*, whereas, indefinite denotes a number that *may exceed, or not*, an assigned number.

127. Many questions concerning infinity have been agitated at various times and occasions, and are still mentioned in various controversies, and therefore require to be noticed here.

128. First, Whether a creature infinitely perfect be possible?

It is generally held, that such a creature is impossible; for, besides many other reasons that might be alleged, such a creature would necessarily depend on the Supreme Being, from whom it should receive its existence: now dependance on any other being is incompatible with infinite perfection.

129. Secondly,

129. Secondly, Whether a number actually infinite be possible?

In my opinion, and in that of many others, it is not: such a number involves a contradiction to the notion we have of number; for, according to our notion of number, it being a collection of distinct units, it is essential to it to be capable, I will not say of addition, as that would be supposing that which is questioned, but of subtraction and division. Now if we subtract one unit from this collection, or one half of the whole, what would the remainder be? Surely not infinite: both halves would then be finite; and of two finite numbers an infinite could not be formed.

130. Thirdly, Whether the number of possible things be infinite?

This question was lately examined in the Academy of Berlin, for the year 1777, p. 408. It is there held to be finite: the opposite opinion appears to me to be true; as the number, for instance, of men possible is inexhaustible, it denoting nothing repugnant to increase; and the knowledge of God, to whom alone it is known, has no boundary: but

but the number, whose existence is possible at any given time, is finite, though unassignable. It is only in an infinite time that it may be considered as infinite—a time that can never be exhausted or terminated; and consequently this number can never be considered as a totality, not even in the Divine intellect: collectively taken, it is always finite, but distributively, infinite. Thus the absurdities of an actual infinite are avoided.

131. Fourthly, Whether the Divine power be infinite?

It certainly is; for it extends to every thing possible, and compatible with his own nature, but not to impossibilities, or acts incompatible with his nature: for instance, to deceptions, breach of promises, rendering the innocent miserable, &c. Creation is a full proof of the extent of this power, as no greater can be conceived, than to make something exist that previously did not exist; by a mere act of will, to make all things to exist that were absolutely willed to exist.

Yet he cannot create an actual infinite, as such an infinite implies a contradiction: thus, for instance, a number or collection of men,
 actually

actually infinite, is repugnant, as the number of eyes or ears would be still greater, which is repugnant to infinitude.

SECT. VII.

OF ACTION, CHANGE, FORCE, POWER, OBJECT, SUBJECT, PERFECTION, CAUSE, MANNER, PRINCIPLE, CHANCE.

132. *Action*, in the strict sense, is a modification of mind produced by the mind itself.

133. In created minds this modification effects a change of such modifications as depend on the mind itself, either directly or indirectly; but not in those states that are independent on it: this requires explanation.

134. There are but two cases in which the mind produces its own modifications, and consequently may be said to act, or be active; namely, when it *judges*, and when it *wills*.

135. In judging, it barely affirms or denies, or doubts, or suspends assent or dissent.

136. The *immediate and direct* acts of the will are election or rejection, with more or less force, of such objects as are proposed to its choice, or suspension of any choice; but *indirectly*, and through the intervention of the

Divine

Divine power, acting according to certain laws, as will hereafter be seen, it produces, or rather occasions, a change or diversification of its own ideas, and also motion in different parts of the body, subjected to the immediate control of its will, and through it of other bodies also.

137. The being that acts, or occasions this change, is called the *agent*; and that in which it is produced, is called the *subject*.

138. God is the only Being that hath the power of acting on other substances, either by bringing them into, or destroying their existence, or impressing on them modifications regulated and varied according to certain laws of his own appointment. We ourselves are incapable of altering or suppressing any of our sensations; for instance, hunger, thirst, pain, or pleasure, by a *mere* act of our will.

139. Nor have we any reason to think, that other superior orders of created beings can act upon us in any way, any more than that we can act upon them. The power of acting on our minds is not implied in any notion we can form of them; therefore, if it exists,

exists, it cannot be known but by revelation ; and by that Mr. Farmer has shewn it cannot be proved. From the superiority of any order of beings over other orders, it cannot be inferred, that, in every case, it possesses powers superior, or even equal, to those possessed by inferior orders; thus men cannot fly like birds, nor inhabit the ocean like fish.—It is only in the power of reasoning that the human species is superior to other animals.

140. *Change* denotes a succession of states.

141. *Force* denotes the degree in which power is exerted.

142. To explain more fully the meaning of this term in the metaphysical sense, it is necessary to remark, first, that the acts of the understanding are elicited with a degree of confidence, greater or lesser, according as the reality and steadiness of the relations on which they are founded, or their nullity, are more or less accurately discerned. Therefore, when this relation is accurately discerned, that is to say, *evident*, the mind is necessitated to assent; and if the impossibility of its existence, by reason of the repugnancy of a relation betwixt the ideas or notions offered, be clearly perceived

perceived or discerned, the mind is necessitated to deny its assent. But if the relation, upon which a judgment should rest, be not clearly discerned, but only the possibility of its existence *apparently* superior to that of its nonexistence, then the assent is given with less confidence; and so also, if the existence of the relation is barely inferred from a weak analogy, and *vice versa*. Also, if the non-existence of the relation, or its repugnancy, be not clearly discovered, but only the *apparent* inferiority of the chances favourable to its existence, or if its nonexistence be inferred barely from its entire want of, or at least from an imperfect, analogy, the dissent or assent is attended with a lower degree of confidence.

143. Secondly: With respect to the will, its acts are accompanied with more or less *desire* or *aversion*, according, in one case, as the objects proposed to its election appear to contribute more or less to its satisfaction or happiness, or in the other, to its dissatisfaction or misery. These degrees, whether of confidence with respect to the acts of the understanding, or of desire or aversion with respect

respect to those of the will, constitute what, in the strict sense, is called *force*.

144. But *force* is also understood in a more enlarged sense ; for as the Supreme Being, in certain cases, alters or moves that aggregate of sensations which are called *bodies*, and that frequently in correspondence to the desires of the will, as well as to the laws by which the succession of these sensations and their various kinds are regulated, it may be said that the will itself, conforming to these laws, acts upon its own and other bodies with an extent proportioned to the intensity of its wishes, the nature of the bodies acted on, and the laws by which they are governed. The extent or degree of the action on bodies resulting from the combination of their mass and velocity, exerted directly by the Supreme mind, or indirectly by the human, is what is called *physical force*. Bodies themselves are perfectly passive, and the motions, seemingly arising from an unintelligible communication of force or motion, are, in fact, changes operated solely by the operation of the Divine will, uniform or varied, according to laws adapted to each particular case.

145. *In morals*, it denotes the degrees of appetibility of objects presented to the mind, or, on the contrary, their averfibility; that is, the difguft, averfion, or abhorrence, they feem calculated to excite and infpire; for fuch as is their appetibility or averfibility, fuch is their force.

146. *Power*, in the metaphyfical fenfe of the word, denotes an effential property of mind, which renders it fit or fufficient for the production of action, and thereby to effect a change of ftate, or a new exiftence, or modification, or relation.

147. As the mind acts both in judging and willing, it muft poffefs both powers; but to produce either action, objects muft be prefented to it. To enable the underftanding to judge, the objects muft be intelligible, otherwife they would not be objects but mere founds; they muft bear fome relation to the mind itfelf, or to each other, elfe no judgment concerning them can be formed; but if they be fuch as imply the impoffibility of any relation to each other, the mind can affirm this repugnancy.

148. The relations of objects to the mind

are those which are discerned to contribute either to gratification or happiness, or, on the contrary, to pain or misery; the former it deems *appetible*, the latter *averse*, and both in various degrees, as mentioned in N^o. 143. Thus distinguished and characterized, the understanding presents them to the will, or *elective power*, with all the known circumstances necessary for, or consequent upon, their attainment or avoidance.

149. The relations of objects to each other are various; many of them have been enumerated in a former work. The mind either affirms or denies their existence betwixt certain objects; that is, affirms their truth or falsehood, or distinguishes the cases in which it deems them true, and those in which it deems them false, that is not to exist, or doubts or suspends its judgment.

150. Where the relations of the objects to each other, or the repugnancy of any relation betwixt them, is obvious, its existence or repugnancy is discerned as soon as the terms that denote the objects are understood; but very commonly this discernment of the interceding relations, when numerous and complex,

plex, requires deliberation, time, and attention, and is still more difficult, when prejudices, self-interest, or various passions, obstruct their discrimination and discussion.

151. And here it is, that the will usurps a dominion over the understanding, compelling it to judge, either without waiting a cool and impartial discussion, or by spurning its dictates, to transfer to its desires the obedience due to it alone, *video meliora proboque—deteriora sequor*.

152. *Physical power* is that which the mind *indirectly* possesses (that is, by the intervention of the Divine will,) of changing its ideas by a *will, or volition*, to do so, and, under certain limitations, of producing motion in its own body, and through it, or by its means, in other bodies, as already mentioned, N^o. 136, and 144.

153. *Moral power* is the connection which objects presented to the will, as appetible or averfible, together with the emotions of desire of the former, and reluctance to the latter, have with its consent or rejection and subsequent resolutions, or suspension of either.

154. It is founded on the instinctive propensity

penfity of all fenfitive beings to attain pleasure or happinefs, either prefent or future, and to fhun actual or future pain or mifery.

155. Objects prefented to the will under thefe different afpects, and frequently accompanied with the emotions of defire or averfion, are called *motives*.

155^l. Any thing, however denominat'ed, prefented to the mind, about which it is occupied, and on which it may, or does, beftow its attention, and alfo any end which it either purfues or avoids, is called an *object*.

155. *Subject* denotes that on which any action operates, or which admits a modification, or from which any relation proceeds or may be deduced.

155^l. *Perfection* denotes any power, property, quality, or relation, which it is better to have than to want, and alfo that which is complete in its kind.

155^e. *Faculty* is a name given to a clafs of powers or capacities, exifting, or generally inherent, in the human mind.

156. *Cause*, ftrictly fo called, is a being by whole mere will a change of any kind happens: the refulting change is called an *effect*,

fect, and is said to be produced. The act of the will which causes the existence of a substance, is called *creation*, and that which destroys it, *annihilation*. The act of the will which induces a modification, is said to *produce* it; and in each case, the being by whose will it exists, or ceases to exist, is called the *efficient cause* of its existence or destruction. The notion of causation necessarily follows the perception of any change.

157. The Supreme Being alone possesses the power of creation, or even of producing or altering the sensations, ideas, or emotions, in the human mind; but the mind itself essentially possesses the power of producing its volitions or nolitions, and its judicial determinations.

158. And *indirectly*, that is, by the intervention of, and in conformity with, certain laws, appointed by the Supreme Being; it can, at will, alter its ideas, and in many cases its sensations, excite motion in its own body, and by it in other bodies; and thus may be considered as an efficient cause, though secondary.

159. But in a loose or less rigorous sense,

any thing that contributes to the existence or modification of a being, or to the destruction of either, is called the *cause* of either respectively.

160. Now many things may contribute to the existence of an effect. Thus, first, whatever excites the will to produce an effect, is called a *motive* to that volition, or to *influence* it: any mere mental excitement is called an *influence*, and the advantage expected, in consequence of the volition, is called the *final cause* of the volition: both are called *moral causes*, and both are frequently the same.

161. Secondly, any object or event, whose occurrence or absence becomes a motive on which a volition is grounded, is called the *occasional cause* of that volition. Thus the neighing of Darius's horse was said to have been the occasional cause of his election to the sovereignty of Persia.

162. So also, such objects or events, whose occurrence or absence remove an obstacle to the operation of *natural causes*, become the *occasional causes* of the effects produced by those natural causes. Thus the rupture of a dyke in Holland, by admitting an inundation, is
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the *occasional cause* of the inundation, and the ravages it produces. · So the want or absence of a pilot, or his want of skill, is often the occasional cause of a shipwreck.

163. The qualification of a person, or the position, figure, or other modification of an object, which enables him, or it, to obstruct the operation of a cause, is called the *conditio sine qua non*, or necessary condition. Thus the skill possessed by a pilot, and the exercise of that skill, are the conditions necessary to the avoidance of shoals. So opening the eyes is a necessary condition to seeing, &c.

164. And that which, acting blindly or necessarily under the *management and direction* of another cause, overcomes the resistance of natural causes, or in general produce any effect, is called the *instrumental cause* of that effect. Thus machines are instrumental causes of the effects they produce.

165. Persons, in consequence of whose volitions bodies are acted on, and also bodies acting on other bodies, or appearing to do so, in consequence of the laws by which corporeal nature is governed, are called *physical* or

natural causes : this appellation is commonly confined to the last-mentioned class.

166. Objects or events which are the effect of one prior cause, may themselves become the causes of other effects connected with the first, and thus a train of causes and effects may be indefinitely prolonged; the first is called the *primary, principal, or remote* cause, and the subsequent acting in conformity to his intention are called *subordinate* causes, and the last the *immediate* cause of the effect.

167. Causes are also *total* or *partial. single* or *conjoint, independent* or *dependent*. A horse drawing a weight not superior to his strength is the *total, single, and independent*, cause of its motion; and two horses drawing a weight, though superior to the strength of each, are *conjoint* causes of its removal, each *dependent* on the assistance of the other, and each the *partial* cause of the effect produced.

168. A man finding his house inconvenient, (the motive,) determines to build another more convenient (the final cause of his volition); for this purpose, (the subordinate motive,)

motive,) he employs masons, carpenters, and smiths, who construct the edifice of which he is thus the principal efficient cause, and the artificers employed the subordinate partial efficient causes, each of his part of the building; the labourers that convey the materials are *animate*, instrumental causes, and the various tools used by the artificers, the *inanimate*, instrumental causes: thus it is, that a king is said to build cities, fortify towns, construct temples, &c. and a general to gain victories; but, with respect to the results of the liberal arts, the artists alone are called the efficient causes of their respective effects: thus the painter alone is the efficient cause of his picture, and the person who employs him is not said to have painted them: and the same may be said of many of the mechanical arts; the will of the person who employs the artists is perhaps only the *exciting cause*, or motive, of their several operations.

169. Causes may be considered as *intentional*, that is, acting with an intention to produce the effect; or as *accidental*, when the effect is neither designed nor even foreseen.

Other distinctions, as that of *adequate* and *inadequate*,

inadequate, as requiring no explanation, I omit.

170. Some Modern philosophers assert,* that a "cause cannot be defined to be any thing but such previous circumstances as are constantly followed by a certain effect; the constancy of result making us conclude, that there must be a sufficient reason in the nature of things, why it should be produced in those circumstances." How vague and inconsistent! it is not then in the previous circumstances that the reason of its production exists, but in the nature of things: *of things*, how vague! What things? What means *nature*? That nothing can exist without a cause; and that consequently every being must be connected with its cause, is evident: but the nature of no being whatsoever is in *reality* connected with an effect, or affords a sufficient reason for its existence, but that of the Divine Being, whose power is infinite; and that of mind, to which the powers of volition and of judgment are essential: but *apparently*, and in consequence of the Divine laws, the power of producing an effect in

* Priestly on Philos. Necess. p. 11. Mém. Berlin. 1761.

predetermined circumstances, is also lodged in bodies, as already said: yet it can be discovered only by experience, or by reasoning on the necessary results from the known essential properties of those bodies, and the general economy of nature in certain circumstances, where an opposition betwixt those properties, and certain modifications, or states, of other bodies take place. Mere constancy of succession never evinces the causality of the object succeeded to, though the presence or application of that object are necessary; thus, though days have ever more succeeded nights, no one imagines night to be the cause of day; though effervescence constantly precedes the solution of limestones in acids, yet it has never been considered as the cause, but rather as the *sign* of the solution.

Axioms relative to causes.

171. First, no being or modification, (except the Supreme) can exist without an efficient cause.*

An infinite series of being (if such a series

* See my Dissertation on Hume's Paradoxes. Mem. R. Irish Academy.

were possible,) whereof each had no cause, but that which immediately preceded it, involves a contradiction ; for, first, it would by the supposition be caused, and consequently it would be an infinite series of *effects* ; and, secondly, this series of effects would, considered in its totality, have no cause ; so that the whole, which is nothing else but a collection of the parts of which it consists, would have a particular property, which none of the parts possess : as well may a *collection* of blind men see, though *each* be supposed blind.

172. Secondly, all causes precede their effects ; for, if they coexisted with their effects, they could not be said to give them existence.*

173. Thirdly, causes may in some measure be traced from their effects ; for, as no being can be its own cause, every being presupposes the power of producing it in some other being : whether that in which such power exists be the cause of a given effect, circumstances must determine ; and if that power be lodged in more than one, which of them has acted ?

If many beings possess this power, that being may be deemed the cause whose known

* See my Essay on Duration, Mem. R. Irish Academy.
effects

effects in the given circumstances are most analogous to those whose cause is sought, or of which some traces are discovered : thus, most metals being soluble in various acids, to discover which acid has effected a given solution of a given metal, among other methods which need not be mentioned here, if, in distilling the solution in a strong heat, sulphur is found sublimed, the vitriolic acid is known to be the cause of the solution. Moral causes also, whether efficient, occasional, or exciting, are frequently discoverable by analogy with the characters, circumstances, and probable motives of the agents capable of producing them ; and still better by the traces of their action, that is, the impression on the senses of those that were present ; that is, on the senses of the witnesses, supposing these duly qualified to attest.

174. Fourthly, from causes known to exist, suitable effects may also be deduced, in appropriate circumstances : upon this observation all voluntary actions are founded : and hence,

175. Fifthly, similar causes are deemed to produce similar effects on similar subjects, and in similar circumstances ; but the similarity
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in each case, if not entire, must be such as to contain nothing incompatible with the production of the effect.

176. Sixthly, dissimilar, nay contrary causes, frequently produce effects in many respects similar: thus the nitric acid, and also mercury, equally dissolve silver: thus alcohol may be produced by extreme cold, as well as by heat, and on living animal substances both impress sensations very similar; hence Virgil says, *frigus penetrabile adurit*.

177. Seventhly, the primary cause of a series of consecutive effects necessarily resulting from the first, must be deemed the cause of all of them; and hence the saying *qui est causa causæ est causa causati*.

178. *Manner*. The preparation, manipulation, contrivance, disposition of the subject, and the application of the instruments, machinery, &c. necessary or useful in the production of the effect, is called the *manner* in which it is produced. Thus the grinding and sifting of wheat, its reduction to dough, and finally baking, denote the manner in which bread is formed. Some effects are immediate, as *creation*, and therefore require no manner

manner, so that it were ridiculous to ask *how* they were produced; but to produce natural effects, the Supreme Being has thought proper to appoint preparatory processes leading to their existence, which processes are called the *manner* of their production.

So also the actions of the human mind, as volitions, and judicial assent or dissent, are immediate; but to attain certain ends, preparation, instruction, method, attention, and deliberation, are necessary.

179. *Principle* denotes the original source, or cause, or a primary truth to which certain effects may be ascribed, or from which certain truths may be deduced.

180. A *scientific principle* is that from which the phenomena or the operations relative to that science may be deduced and explained; if not entirely, at least in part, for there may be many principles.

To explain a phenomenon, is to assign, in intelligible terms, a cause that can produce it, or a law to which it conforms, and of which it is a consequence.

181. A *Physical principle* is that which by its activity is the primary cause of subsequent

quent effects resulting successively from intermediate causes. So the weights of a clock are the principle of its motion, for they pull round the main wheel; this by its teeth catches hold of the next wheel, and so on. Attraction and repulsion are also primary physical principles, as certain affinities are of chymical phænomena.

182. So a *moral principle* is that from which many moral effects are deducible, as *self-love, sympathy, moral sense, &c.*

183. A *metaphysical principle* is that from which metaphysical truths are deducible.

184. The *subject of various modifications* is also frequently called a principle; thus the soul is often called the invisible principle of our thoughts and actions: thus, flax being first decorticated, then spun, then wove, is the fundamental principle of linen, and, after other operations, of paper.

185. *Chance* does not denote the absence of a cause, but merely the unknown cause of an event, or the undesigned effect of a known cause.

SECT. VII.

RELATIONS, ORDER, CONNECTION, NECESSITY, CONTINGENCY;
LIBERTY, VOLUNTARY, SPONTANEITY.

186. The definition of a relation, its subject, foundation, and term, have already been explained : Logick, Vol. I. p. 131.

187. First, it is impossible to have a notion of a relation, without having any notion of the things related; for a relation existing only in the mind, the mind cannot refer one thing to the other without knowing either, and the reason or foundation on which the reference is founded : so Locke, Lib. i. C. iv. sec. 6.

188. Secondly, a subject is referred to its term as to its correlative, and not as absolutely considered : thus the relation of a father to his son is founded on his being his *son*; and not as being John or James, &c. So subjects are related to their king, as *king*, and not as George or Edward, &c. and *vice versa*.

189. Thirdly, the same subject may bear opposite relations to different terms : thus a

193. *Order* denotes, either the gradation with which objects succeed each other, or an arrangement most agreeable to the attainment of a proposed end.

194. *Connexion* denotes an association of things betwixt which any regular relation subsists.

194^b. *Similitude* denotes the natural representation of one thing by another: things are said to be similar, when the mind is in any respect so equally impressed by both, that one may in that respect mistake one for the other.

195. *Necessity* denotes the certain existence of an object or event, from the impossibility of its non-existence; and as this impossibility may be either absolute, or relative to the laws by which the existence of events is governed, necessity is distinguished into three sorts, absolute, physical, and moral.

196. *Absolute* necessity is that which results from the utter impossibility of a thing being otherwise than it is: of this nature is the existence of the Supreme Being; for as we know that all the beings with which we are acquainted have *begun* to exist, and could not have given existence to themselves, it is plain
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that

that existence is not essential to them; it were therefore impossible that they should exist unless they received existence from another being; and it were impossible that even this being should exist, unless existence were essential to him; and existence being essential to him, it is impossible that he should not exist, or in other words, his existence is absolutely necessary: this necessity is also called *metaphysical*, as it does not relate to mere corporal objects or events, but abstracts from and soars above them to truths more universal; it is also called *mathematical*, because the truths of mathematical axioms and demonstrated propositions is so necessary, that their falsehood would involve a contradiction.

197. *Physical* necessity relates to corporal nature, and denotes, first, the impossibility of the existence of any object or event, otherwise than in conformity with the preordained laws of its existence.

198. Secondly, the impossibility that objects or events should not exist, when their existence is agreeable to the known physical laws by which they are governed, constantly and universally.

199. These laws are known by the constancy of an effect in similar circumstances, and on similar subjects.

200. Some are *general*, relating to all corporeal objects, as the law of gravitation; and these are perfectly known, or nearly so.

201. Some are *particular*, as those of electricity, magnetism, and chymical affinities.

202. Some are imperfectly known, being sometimes, though rarely, modified by other laws that are unknown: such are those of the animal economy. Hence the usual effects of the known laws cannot be expected with absolute certainty—they are not *necessary*, but highly probable.

203. Events not conformable to the known laws, owing to their modification in unknown circumstances, are called *extraordinary*, or *prodigies*.

204. Events evidently independent of any natural laws, and repugnant to such of them as are perfectly known, are called *miracles*.

205. Hence physical necessity, where it really takes place, does not admit of degrees.

205^h. If an end be necessary, the means re-

quisite to obtain that end are equally necessary.—See Grot. on Matt. 173.

206. *Moral* necessity relates, first, to the laws by which free moral agents are governed, and of these there are three: first, that they cannot *judge* without discerning, or being otherwise satisfied of the existence or non-existence of a relation, betwixt the objects of their judgment; nor *will*, without an exciting cause of their volitions, that is, without a motive; secondly, that they do in every circumstance prefer permanent pleasure to permanent pain, if equally assured of their existence.

207. Hence volitions, repugnant to these laws, are absolutely impossible; and, on the contrary, those that are consentaneous to the inclinations of mankind, and unopposed by any motive, are absolutely necessary.

208. Or, secondly, it denotes the *extreme probability* of an event that is conformable to the prejudices, habits, manners, and inclinations of mankind, even when resisted by opposite motives, whose truth is acknowledged; but not the *absolute* impossibility of a different or an opposite event, in all times
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and circumstances; for of such opposite events, in a course of ages, many instances occur, particularly where superstition, fanaticism, or even true religion, prevail. Witness the conduct of Regulus, and the Athenian judgment: but such events are justly deemed *extraordinary*, or *prodigious*.

209. Hence moral necessity, where it denotes only an extreme probability, admits of degrees.

210. *Contingency* denotes the possibility that an object or event may exist or not exist. Hence it requires, first, that a cause adequate to the production of its existence should also exist, as no being can exist of itself; and, secondly, that neither its constitution or destruction should involve a contradiction or repugnancy, neither in itself, nor to any thing else already in existence.

211. But it is not necessary that its existence and nonexistence should be equally possible, for either may be more or less probable or improbable; and, therefore, strictly speaking, it admits of degrees.

212. *Liberty* belongs to rational agents only, and denotes the mode or manner in

which they act, or have the power of acting or not acting.

213. As the power of acting (though it resides also in some cases in the understanding) is commonly denominated the faculty of *willing*, hence it is that liberty commonly relates to the mode or manner in which that power is exercised.

214. We must also remark, that the actions here meant are those of the will itself, and not those which it may command, as the motions of its own body, or of other bodies.

215. We have already said, that the will cannot act without a motive or exciting or occasional cause; for, to act, it must have some end or purpose in view: this we know by the slightest attention and recollection.

216. But if *only one* motive to action exists, we must act according to its direction; for, by the supposition, there is no motive or reason to oppose it.

217. Liberty then, when perfect, consists in the complete and equal power of acceding to, consenting or rejecting, that is, *willing* or *not willing*, a proposed measure, or of electing either of the measures proposed to the mind, if

if more than one be presented to its consideration.

218. Such liberty results from an exact equality of the motives that urge to, or dissuade from, a proposed resolution. Actions proceeding from such a power are said to be perfectly free.

219. Motives then, to contrary volitions, either both attract to opposite or different objects (as pleasure and virtue, in the choice of Hercules), or some allure to, and others dissuade from, the same object or species of action. In each case the mind, on a joint view and consideration of each, must be perfectly indifferent to either, else the determination to reject the one, and embrace the other, cannot be said to be perfectly free.

220. I know that many in such a case consider a volition to be impossible, and quote the fable of Buridanus's ass; but they are deceived. In inanimate bodies, urged by equal opposite forces, motion indeed would be impossible, because the principle of action is external, and the external forces counterbalance each other; but in the mind the power of acting is internal, and as the motives propose

pose signal advantages, it may adhere to that proposed by either. If the choice were offered me of two rouleaus of 100 guineas each, placed on a table at equal distances from me, I surely would not hesitate, much less abstain from, taking either, well knowing that one was as good as the other.

221. In proportion as the motives to one side of a proposed choice are less urgent, or appear less weighty than those on the other, the liberty or freedom of the will is more imperfect; nay, if the motives on one side are unopposed by any on the other, then, indeed, the will is necessitated.

222. An opposition of motives being supposed, the most urgent (that is, those whose rejection is attended with most uneasiness,) are either consonant to the dictates of the understanding, or the suggestions of the moral sense; and then the acts of the will, grounded upon them, are wise and laudable; or they are repugnant to the dictates of either, and then they are foolish or criminal.

223. But motives the most urgent, such as the inclinations, passions, and desires of mankind, are not always the most prevalent; those
that

that are less urgent are sometimes most persuasive. Actions just and proper, flowing from such motives, are frequently the most meritorious; such as the suffering of the martyrs. And, on the contrary, such actions as are unjust and wicked, are most criminal and flagitious; such as the refusal of a tortured criminal to discover his accomplices. In such cases the freedom of the will, though manifestly impaired, is not extinct.

224. Hence we see why the greater the temptation, that is, the more urgent the motive to commit a crime, the less criminal is its commission in the sense of all mankind; and, on the contrary, the more meritorious its avoidance. Thus, if Artaxerxes had put his mother to death, who had poisoned his wife, and who had tortured the slave that saved his life, he would indeed have been criminal; but infinitely less so than Nero, who murdered his mother without such provocation. So the conduct of David, in reiteratedly sparing the life of Saul, who so often had lain in wait for his, was highly meritorious.

225. And, on the contrary, the more insignificant, wanton, or extravagant, the motive
to

to a crime, the more flagitious is its commission. Thus the crime of a French nobleman, who shot a flater mounting a ladder, to shew he could shoot flying, was more atrocious than that of a common murderer.

226. Hence it is plain, that motives are barely the occasional and exciting, not the efficient, causes of our volitions; for if they were, the most urgent would always be obeyed. Necessarians think that the motives yielded to must have been the strongest, which is manifestly begging the question: this, however, they say, is judging of causes by their effects, a mode of reasoning indeed perfectly just in physics, but not so in morals; for experience shews that the motives of self-love, self-interest, ambition, and the gratification of passions; gratitude, pity, &c. are by far the most urgent, and that a line of conduct conformable to their dictates is by far the most probable; and yet they are sometimes resisted, even when unopposed by motives equally urgent. Necessarians reason just as the vulgar do, that the most successful general is always the most able; yet the best judges are now agreed, that Hannibal, though de-
feated,

feated, was at least as able a commander as Scipio, who defeated him.

227. The definitions of liberty, given by necessarians, are inaccurate. According to Hobbes, "liberty is the absence of all impediments to action, that are not contained in the nature and intrinsic quality of the agent. So we say, he that is tied wants the liberty to go, because the impediment is not in him, but in his bands; whereas, we say not so of him that is sick or lame, because the impediment is in himself." I should, however, judge, that a person, either very sick or very lame, may be said not to have the liberty of going, for he has not the power; besides, by action, volition should be understood.

228. Others define liberty to be the power of *doing* what one pleases.* This definition also is inaccurate; for the question relates to the liberty of *willing*, and not merely of acting. "Every one (it is said) may turn his thoughts to what subject he pleases." To *what subject he pleases* means, I suppose, *to what subject he chooses*. Now, in the necessa-

* Priestley on Necessity, p. 2.

rian system, *may* signifies *must* : his election is necessary, and therefore he should say, every one must turn his thoughts to what subject he *must* please, or chuse to turn them to.

229. Neither is Mr. Locke's notion of liberty exactly correct. He tells us, * that "liberty is the power of an agent to do or "forbear any particular action, according to "the determination or thought of the mind, "whereby either of them is preferred to the "other." But the point in debate is not, whether the agent has the power of acting, or not acting, according to the determination of his will ; for every one knows that power may not exist, as many actions are impossible : a man in chains cannot walk, nor can any man fly, let his mind determine as it may. But the point in question here is, whether he *can* prefer acting to forbearing to act, or the contrary : this the assertors of liberty affirm, with the limitations already mentioned, and the necessarians deny.

230. He also thinks,† that agents alone can be said to be free; and that it is ridiculous

* B. ii. C. xxi. sec. 8.

† Sec. 14 and 16, B. ii. cap. xxi.

to ask, whether the will be free or not, as the will is only a power, and liberty is also a power, which cannot be the modification or power of another power; but he forgets that a power may be exerted, either necessarily or freely, and liberty is not a power distinct from that of the will, but rather a modification, or particular mode, of its action. A man in extreme pain, not urged by any opposite motive, necessarily wills its cessation; and, consequently, both freedom and necessity are applicable, in different circumstances, to that faculty, or power of acting of the agent, to which a certain class of objects is referred, and which is called the will.

231. An action is called *spontaneous* when it arises from mechanical, instinctive, or other animal or chymical causes, without any determination of the will to produce it: as growth, nutrition, circulation of the blood, &c.

232. A *voluntary act* is that which is performed with a sufficient knowledge of its nature and consequences, and not extorted by a well grounded fear of an illegal infliction of corporeal punishment, loss of life or limb, imprisonment, or violation of property. Such actions

actions must be deemed voluntary, though often accompanied with reluctance : as when a man sells his estate to preserve the liberty of his person, &c. ; or consents to the loss of a limb to save his life ; or casts his property into the sea to avoid a shipwreck.

233. An *involuntary* act is that which is derived from, or accompanied with, an insufficient knowledge of its nature and circumstances, or consequences, (see Grotius on St. Matt. 255) ; or from a well-grounded apprehension of danger to life, limb, or property, illegally or fraudulently impressed : as the delivery of money to a robber, for fear of death or other bodily mischief. Actions of the former kind, arising from ignorance, may be criminal, when the ignorance itself is culpable ; but the latter are so, only when death should be preferred to the proposed act. In the first case the action is involuntary ; in the second it is mixt, being partly voluntary and partly involuntary.

SECT. VIII.

SPACE AND DURATION.

234. Nothing has contributed more to the growth and diffusion of that general scepticism, so prevalent in the last century, with respect to all questions that cannot be decided by the immediate testimony of the senses, than the inextricable difficulties that were supposed to attend the nature of objects most familiar to all mankind, and unhesitatingly conceived to be thoroughly understood; for it seemed natural to conclude, that if, upon examination, we find an exact notion, even of these, impossible to be attained, we have reason to suppose, that other objects, with which we are not so well acquainted, are placed beyond the reach of human faculties: thus argued Bayle (*Zenon*), thus Hume reasoned. Now, certainly, no objects are more familiar to us than space and duration; and, in perplexing the notions of these, they have exhausted the whole force of their subtlety. If, on the contrary, it can be shewn, that the notions of these are perfectly plain and intelligible, in

the sense in which they are universally taken ; and that the absurdities, that have occurred in explaining them, might easily be avoided, by only adhering to their known signification, one stumbling-block in metaphysical inquiries will be removed.* This, then, is the purport of the present paper. But, moreover, to shew the necessity of investigating subjects, which seemingly require no discussion, the difficulties that occurred on considering these, with the various opinions they suggested, must previously be stated.

235. The different systems of the Epicureans and Peripatetics, gave the first occasion to the controversies concerning the nature of space. The Epicureans admitted a vacuum, or empty space, as one of their first principles. The Peripatetics allowed, indeed, the possibility of a vacuum, but denied its existence. Des Cartes, in examining the question, denied even its possibility ; asserting, that space necessarily implies extension : but a mere nothing, or nonentity, such as a perfect vacuum,

* It is strange, that so eminent a metaphysician as Condillac should say, that we know nothing of the nature of space or duration. Art. de Penser, p. 115, in 12mo.

if it existed, must be allowed to be, can have no properties, and, consequently, cannot be extended; for it would be absurd to say, for instance, so many *acres of nothing*. His disciples further insisted, that space must be either a substance, or the modification of some substance, as, between these, nothing intermediate can be supposed to exist: but *space* is not a mode of any substance, therefore it must itself be a substance, and, consequently, can never be supposed empty.

236. To evade the force of this reasoning, the Peripatetics and Epicureans made different replies. The former said, that empty *space* is a mere capacity or possibility of receiving bodies, and that its extension is only the possible extension of such bodies as may be placed in it. But this answer was soon found to be unsatisfactory; for the space, *actually* existing between two distant bodies, would remain unaltered, even if all the intervening bodies were annihilated. Moreover, the capacity of receiving bodies is merely the consequence of the vacuity of space, and not space itself. The Epicureans, as Gassendi and Bernier, followed by Le Clerc, supposed it to be a peculiar

peculiar kind of being, which possessed no other property but extension. It was not, therefore, a spiritual substance, this not being extended, nor a material being, as it possessed no solidity, but a being *sui generis*. This opinion appearing as untenable as the foregoing, from whence it differed only by being more fully explained, was embraced by no one else.

237. David de Rodon, an eminent Calvinist professor at Nismes, some time before the year 1660, and possibly during the life of Des Cartes, struck with the absurdity of supposing any thing real and eternal besides God, advanced a very different opinion; as I find, by a letter from Bayle to La Colle, 4 Bayle, Oeuvres Posth. 845. He maintained, that space was nothing else than the Divine immensity. This opinion was embraced by Otto Guericke, about 1670, as Leibnitz thinks, and afterwards by the celebrated Dr. Samuel Clarke. It appears in the first edition of his Sermons in 1706, and more explicitly in his several replies to Dr. Joseph Butler in 1713, and his correspondence with the celebrated Leibnitz in 1715, as I shall presently mention;

mention; and was also long before obscurely hinted by many of the scholastics. In the meantime, that is, about the year 1690, Leibnitz proposed a new system, namely, that of Monads, or simple substances absolutely unextended, but from whose disposition or order, with respect to each other, the *appearance* of space resulted: a system so ingenious and well connected, that for many years it met the approbation of the most distinguished philosophers in Germany, and the admiration of the rest of Europe.

238. A few years after, Mr. Locke published his inestimable Essay on the Human Understanding; yet his sentiments concerning space are confusedly, and rather inconsistently, stated. For, first, without giving any definition of space, he divides it into solid and empty. He tells us, we acquire the idea of the first when we conceive it so taken up by a solid substance as to exclude all other solid substances, and hinder two other bodies, moving towards each other in a straight line, from coming into contact with each other.—But, if we conceive two bodies at a distance to approach each other, without touching or dis-

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placing

placing any solid thing until their surfaces come to meet, we thus acquire the idea of space without solidity, or pure space. Lib. II, cap. iv. sec. 2, 3. And (sec. 5,) he adds, “the extension of body being nothing but the continuity of solid, separable, moveable parts, the extension of space is that of un-solid, inseparable, and immoveable parts.”—Here he plainly asserts, that pure space is extended, and consists of immoveable and inseparable parts.

239. In his 13th chapter, he states the idea of space more accurately; for he says it is the *distance* between any two bodies, or between the parts of the same body: that, if it be considered only *lengthways*, without considering any thing else between, it is called *distance*; but, if considered in length, breadth, and thickness, it may be called *capacity*. The term *extension* is usually applied to it, in what manner soever it is considered, sec. 2 and 3.—But, in sec. 4, he no longer considers space as *distance*, but tells us, “that each different distance is a different modification of space.”—Yet, as different distances are rather different relations betwixt the distant bodies, I do

do not well understand how they can be called modifications of space; modification being a term usually applied to substances, and not to relations.

240. Sect. 16, he asks those, who inquire whether space be body or spirit, who told them, that there could be no other being but body and spirit? And, if they again inquire, “whether this space be a substance or an accident, he fairly tells them he does not know.” From all which, it is plain, he considered simple pure space as something really existing, and distinct from distance.

241. And, accordingly, sec. 21, he says, “if body be not supposed infinite, which he thinks no one will affirm, he asks, whether, if God placed a man at the extremity of corporeal beings, he could not stretch his hand beyond his body? If he could, then he would put his arm where there was before space without body.” And, chap. xvii. sec. 4, he adds, “so far as body reaches, so far no one can doubt of extension; and, when we are come to the utmost extremity of body, what is there that can satisfy the mind, that it is at the

“ end of space, when it perceives it is not ?” and finally concludes, “ that space is infinite.” And, sec. 20, he denies, that the existence of matter is any way necessary to the existence of space.

242. In 1713, Doctor Berkely first published his immortal work, on the Principles of Human Knowledge; in the cxvi § of which he asserts, that pure space is nothing more than the possibility of motion, without the least resistance; and that, if all bodies were annihilated, there could be no motion, and, consequently, no space. And thus he says, (sec. cxvii.) “ we free ourselves from that dangerous dilemma, to which several imagined themselves reduced, to wit, of thinking that real space is God; or else, that there is something besides God, eternal, uncreated, infinite, indivisible, immutable; both which may justly be thought pernicious and absurd notions.” This opinion was afterwards adopted by Dr. Doddridge, in his Lectures. p. 139; and by Mr. Condillac, *Art. de Penfer*, chap. viii.

243. At the latter end of the same year, an anonymous writer, styling himself a Gentleman

man of Gloucestershire, but thought to be Dr. Joseph Butler, represented to Dr. Clarke, some difficulties, which had occurred to him, in the Doctor's excellent treatise, entitled, *a Demonstration of the Being and Attributes of God*; for having there asserted, that the necessity of the Supreme Being must have existed *every where*, as well as always, Dr. Butler informed him he did not perceive any connexion between ubiquity and necessary existence. Dr. Clarke replied, that he considered space as a *mode* of the self-existing substance; and, being evidently necessary itself, proves that the substance, of which it is a property, must also be necessary. Nay, he adds, that extension is necessary to the existence of every being. In his third reply, he is still more explicit: for he asserts, that all other substances are *in* space, and are penetrated by it; but the self-existing substance is not in space, nor penetrated by it; but is itself, as if it were the *substratum* of space, the ground of the existence of space and duration. Dr. Butler, in his fourth Letter, owns himself convinced of what he at first doubted, that a necessary being must exist
every

every where; and Dr. Clarke, in his answer to that letter, approaches much nearer to the truth than he had before done, though still far from it. He says, “ the idea of
 “ space is an abstract or partial idea of a
 “ certain quality or relation, which we evi-
 “ dently see to be necessarily existing; and,
 “ yet, (not being itself a substance,) necessa-
 “ rily presupposes a substance, without which
 “ it could not exist.”

244 In his fifth Letter, Dr. Butler denies, that space can be supposed a property or modification of the Divine substance; for, if that were annihilated, still the idea of space would remain; and owns himself at a loss to define the nature of space. To which Dr. Clarke replies, “ that, since space necessarily
 “ remains, even after it is supposed to be ta-
 “ ken away, and is not itself a substance, as
 “ it is plain it is not, then the substance, on
 “ whose existence it depends, will necessarily
 “ remain also, even after it is supposed to be
 “ taken away; which shews the supposition to
 “ be impossible and contradictory.”

245. Thus that correspondence ended. But, in an answer to another Gentleman, Dr.
 Clarke

Clarke asserts, that infinite space is infinite extension ; and, that to suppose it finite is an express contradiction. And, that “ they
 “ who remove the idea of infinity, by sup-
 “ posing space to be nothing but a relation
 “ between two bodies, are guilty of an ab-
 “ surdity, by supposing that which is nothing
 “ to have *real* quantities ; for the space be-
 “ twixt two bodies, is always unalterably just
 “ what it was ; and has the same dimensions,
 “ quantity, and figure, whether these, or any
 “ other bodies, be there, or any where else,
 “ or not at all.”—To set bounds to space, is to suppose it bounded by something which itself takes up space ; and that is a contradiction.

246. But the Doctor was engaged in a much more animated correspondence, on the nature of space, shortly after. It arose on the following occasion. Leibnitz, irritated by the decision of the Royal Society of London, in favour of Newton, on the disputed question, whether he or Sir Isaac was the discoverer of the differential or fluxionary calculus, criticised, with much asperity, some parts of Sir Isaac's philosophy, and particularly

cularly his sentiments on the nature of space. This censure he conveyed in a letter to the Princess Caroline of Wales, afterwards queen-confort of George II. who communicated it to Dr. Clarke, and engaged him to answer it. His answer she transmitted to Leibnitz, and became the medium of the correspondence that ensued betwixt these two great metaphysicians. Of their successive answers and replies, I shall give a brief extract.

247. *Clarke.* Space, finite or infinite, is absolutely indivisible, even in thought. To imagine its parts moved from each other, is to imagine them moved out of themselves; and yet space is not a mere point.

248. *Leibnitz.* Space cannot be a real, absolute being, otherwise it should be eternal and infinite. But, as it consists of parts, it is not a thing that can belong to God. Space is something merely relative, as time is; it is the order of co-existing things; as time is of successive things. If space were an absolute being, something would have happened, for which no sufficient reason can be assigned: for space is absolutely uniform;
and,

and, without the things placed in it, one does not differ from another: therefore there can be no reason, why God should have placed bodies, in space, after one particular manner, and not otherwise. But if space is nothing else, but that *order* or *relation*, and *nothing at all* without bodies, but the *possibility* of placing them; then, two states, to wit, that which now is, and another, supposed the reverse, would not at all differ from each other. Their difference would only be found, in our chimerical supposition of the reality of space: but, in truth, one would be exactly the same as the other; they being absolutely *indiscernible* (undistinguishable), and, consequently, leaving no room to inquire for the reason of the preference of one to the other.

249. *Clarke*. Undoubtedly, nothing happens without a sufficient reason, why it is, rather than *not*; why thus, rather than otherwise: but, in things perfectly indifferent, *mere will* is that sufficient reason; as, in the present instance, why matter was created in one place, rather than in another; all places being originally alike. And the case is the same, even though space were nothing real,
but

but only the mere order of bodies : for it would still be different, whether three equal particles should be placed in the order a, b, c, or in the order b, a, c; for different spaces are equally distinct, though perfectly alike. Besides, if space were nothing real, but the mere order of bodies, it would follow, that, if the earth, sun, and moon, had been placed where the remotest fixed stars now are, and in the same order and distance, with regard to one another, as they now are, they would then be in the same place too as they are now ; which is an evident contradiction.

250. Space is not a being, an eternal and infinite being ; but the property, or consequence, of a Being, eternal and infinite. Infinite space is immensity, but immensity is not God. Infinite space is *one*, absolutely and essentially indivisible. To suppose it parted, is a contradiction in terms, as there must be space in the partition itself ; which is to suppose it parted, and not parted, at the same time. The immensity, or omnipresence of God, is no more a division of his substance into parts, than his duration is a division of his existence into parts. There is no difficulty
here,

(III)

here, but from the figurative abuse of the word *parts*.

251. If space were nothing but the order of co-existing things, it would follow, that if God should move in a straight line, the whole material world, with any degree of velocity soever, yet it would still continue in the same place, and nothing would receive a shock on the sudden stopping of the motion.-- Further, space is a *quantity*, which order and situation are not.

252. To argue, that, because space is uniform, and one part does not differ from another, therefore, bodies created in one place, if they had been created in another, supposing them to keep the same situation with regard to each other, would still be in the same place as before, is a manifest contradiction.

253. *Leibnitz*. To suppose two things indiscernible, is to suppose the same thing under two names; therefore, to suppose that the universe could have had, at first, another position, or place, than that which it actually had; and yet that all the parts should have had the same situation among themselves, as that which they actually had; such a supposition

position is an impossible fiction.—If space be a property, it must be the property of some substance; but of what substance will bounded empty space be the property?

254. If infinite space be immensity, finite space will be the opposite to immensity; it will be mensurability, or limited extension. Now, extension must be the affection of something extended: but, if that space be empty, it will be an attribute without a subject; an extension without any thing extended.

255. If space be an absolute reality, far from being a property opposed to substance, it will have a greater reality than substances themselves. God cannot destroy it, nor even change it. It will be immense, immutable, and eternal.—To say, that God can cause the whole universe to move forward in a right line, or any other line, without making any other alteration in it, is a chimerical supposition: for two states, indiscernible from each other, are the same state; and, consequently, it is a change without any change.

256. *Clarke*. Two things, by being exactly alike, do not cease to be *two*: the parts of
time

time are exactly alike, yet two instants are not the same instant, nor are they two names of the same instant.

257. Extramundane space (if the world be finite) is not imaginary.

258. Space, void of body, is the property of an incorporeal substance. It is not bounded by bodies, but exists equally within and without bodies. It is not enclosed between bodies; but bodies, existing in unbounded space, are themselves only terminated by their own dimensions. Void space is not an attribute, without a subject; for God is certainly present, and possibly many other substances, which are not matter. Parts, in the corporeal sense of the word, are separable: but infinite space, though it may, by us, be *partially* apprehended, that is, may in our imagination be conceived, as composed of parts; yet these parts, (improperly so called,) being essentially indiscerptible and immoveable, are not partible, without an express contradiction in terms.

259. If the world be finite, it is moveable by the power of God. Two places, though exactly alike, are not the same place: nor is

the motion or rest of the universe the same state, any more than the motion or rest of a ship is the same state, because a man shut up in the cabin, perceives it not; but, upon a sudden stop. it would have other real effects. Space is the place of all things, and of all ideas; as duration is the duration of all things, and of all ideas.

260. *Leibnitz*. The parts of *time* or *place*, considered in themselves, are ideal things, and therefore perfectly resemble one another, like two abstract units; but it is not so with two concrete units, or two real times, or two spaces filled up, that is, truly actual.

261. If space be the property of the substance which is in space, the same space will, sometimes, be the property of one body, and sometimes of another. If the author deny, that limited space is a property of limited things, he must also deny, that infinite space is a property of an infinite thing.

262. Spaces are sometimes empty, and sometimes filled up; therefore, there will be, in the essence of God, parts sometimes empty, and sometimes full, and, consequently, liable to a perpetual change.

263. God's immensity makes him actually present in all spaces; but, now, if God is in space, how can it be said, that space is in God? We have often heard, that a property is in its subject; but never, that a subject is in its property.

264. The author departs from the received sense of words; maintaining, that space has no parts, because its parts are not separable. But they may be assigned in space, either by the bodies that are in it, or by lines and surfaces, drawn and described in it.

265. A man in a ship may not perceive its motion. The reality of motion does not depend on its being observed; but it does on the possibility of its being observed. There can be no motion, where no change can be observed.

266. As to the objection, that space is a quantity, and that situation and order are not so; I answer, that order has its quantity: there is distance, there is interval. Relative things have their quantity, as well as absolute ones; for instance, ratios, or proportions.

267. Space is not the place of all things, for it is not the place of God; nor can I see
 1 2 how

Now it can be said to be the place of ideas, for ideas are in the mind.

268. *Clarke*. It was affirmed, that the motion of the universe would produce no change at all: yet no answer was given to the argument, that a sudden increase, or cessation of the motion of the whole, would give a sensible shock to all the parts. And no way is shewn to avoid this absurd consequence, that the mobility of one body depends on the existence of other bodies.

269. The space occupied by a body is not the extension of the body; but the extended body exists in that space. There is no such thing, in reality, as bounded space: we only imagine, or fix our attention on what part we please. It does not pass from subject to subject, but is always, invariably, the immensity of one and the same *immensum*. God suffers no change by the variety and changeableness of things; as St. Paul says, Acts, xvii. 28. *in him all things move, and have their being.*

270. God does not exist in space, but his existence causes space. Space is not absolutely nothing; for of nothing there is no quantity,

quantity, no dimensions, no properties. Nor is it a mere idea, for no idea of space can be framed larger than finite. And yet reason demonstrates, that it is a contradiction that space should not be actually infinite. Nor is it a bare relation of one thing to another, arising from their situation or order; because space is a quantity, which relations (such as situation and order) are not.

271. If it were true, that ratios and proportions were quantities, yet it would not follow, that situation and order, which are relations of a different kind, would be quantities also. But, secondly, proportions are not quantities, but the proportions of quantities. A proportion is not a greater or less quantity of comparison or relation, but the comparison of a greater or lesser quantity. Space is the place of ideas, because it is the place of the substances themselves, in whose understandings ideas exist.

272. Death prevented Leibnitz from replying to these last paragraphs; but the objections they contain were replied to, by Lewis Philip Thummigius, in 1722. I have not as yet been able to procure his annotations.

273. In England this controversy was again revived, in 1731, by Dr. Law, late Bishop of Carlisle, in his notes on Archbishop King's Essays on the Origin of Evil, who denied the reality of space; and was soon after answered (as is supposed) by Dr. Gregory Sharpe, who supported Dr. Clarke's opinion. This answer Dr. Law endeavoured to invalidate, in his notes to a second edition of King's Essay; and to his objections Sharpe replied.

274. The new combatants treated this subject in a manner somewhat different from the preceding. Of this I shall now give a summary view.

275. *Law*. I can form no other notion of space, than either, first, as the mere negation or absence of matter; or, secondly, as the extension of body, abstractedly considered, as separate from any particular body. *

276. Of space, considered as the absence or negation of matter, we may have a positive

* He adds a third mode of conceiving it, which is not, indeed, his own, but rather Cudworth's; namely, that of a subject, or substratum of extension, *in abstracto*. Of this, as too subtle, and scarcely intelligible, I shall take no notice.

idea, as Mr. Locke has fully shewn, (B. ii. C. viii. sec. 4, 5.) as well as of silence, darkness, and many other privations. But, to argue from such an idea, that space is something external, and has a real existence, is as little reasonable as to say, that, because we have an idea of darkness different from that of light, therefore darkness must be something positive, and has as real an existence as light has.

277. To say that space must have existence, because it has some properties; for instance, *penetrability*, or the capacity of receiving bodies; seems to me the same as to say, that silence must be something, because it has the property of admitting sound.

278. To attribute extension or parts to space, according to the first notion given of it, would be the same as to talk of the extension or parts of *absence*, or any other privation.

279. *Sharpe*. To suppose that space is nothing but the absence of matter, is absurd; for if we suppose two walls not to touch one another, there must necessarily be something between them, otherwise there would be no

difference between touching and not touching.

280. Whatever is induced with properties must actually exist. Now space has the property, or capacity, of receiving all bodies. Darkneſs, abſtractedly conſidered, has not the property of admitting light, nor ſilence, that of admitting ſound; but darkneſs is rather that part of ſpace that is free from light.

281. Thus far the debate was intelligibly carried on, and ſome new matter advanced. The remainder conſiſts chiefly of a repetition of the arguments already adduced in the Leibnitſian correſpondence, and therefore requires no further notice.

282. We may now ſtate the true notion of ſpace, which is ſo obvious, that it is ſurpriſing it ſhould have eſcaped the notice of theſe profound metaphyſicians.

283. Space is nothing more or leſs than the relation of two or more diſtant bodies to each other, or of the diſtant parts of the ſame body to each other.

284. All relations are merely mental, but the objects related are real. The foundation
of

of this relation is the standard extension, or the number of such extensions, as inches, feet, miles, &c. as we find or conceive necessary to reach from one body to the other. Thus all that can with truth be affirmed of space may clearly be conceived.

285. Its primary notion is not the capacity of receiving bodies; this is merely a consequence inferred from distance: in any other point of view this capacity is merely fictitious. Otherwise, before any body was created, a capacity for receiving bodies existed; that is, when nothing whatsoever existed. As well might it be said, that a capacity of receiving spirits existed before any spirit was created. From what principle this capacity is inferred will presently be seen.

286. The notion of *distance* is originally acquired through the sense of feeling. By the repetition of tactile sensations, from one part of the body to another, we gain the notion of *extension*, which consists in nothing else than in the number and continuity of tactile sensations, either perceived, or conceived to be perceptible, betwixt two or more objects. The difference between the first and
last

last of these sensations is what is called *distance*. Neither the knowledge of distance, nor consequently that of extension, is originally gained by the sight; but gradually learned by experience of the connexion betwixt distant objects, previously known by tact and visual appearances, and the motion and feelings of the eye itself; as Dr. Berkley has clearly shewn, in his admirable Essay on Vision, and has been amply proved by the subsequent experiments of Dr. Cheselden. * From this connexion it happens, that the different visible appearances of near and distant bodies constantly suggest the idea of extension, as subsisting between them, even when a perfect vacuum is supposed: but this suggestion, not being in that case founded in reality, is a mere imagination. It is this imagination that so far imposed on Dr. Clarke and others, as to persuade them to think there is *something* where, in fact, there is nothing: an imagination which, arising from an early association, cannot be got rid of, as Clarke

* Some of the most perspicacious of the scholastics, much despised as they are, reasoned in the same manner. Mastrius Log. 329.

and his correspondent allowed, though, by an accurate investigation, it is proved to be a deception.

287. When bodies are distant from each other there is nothing to prevent another body from being placed between them, if none be already so placed. This denial of any obstacle is what is called *capacity*: it is nothing positive, but merely a possibility inferred from uncontinuous distance.

288. Still, it will be said, that there is an interval between distant bodies, otherwise they could not be distant; and this interval may be measured, and therefore it is extended. Now this interval is what is called *space*, and, consequently, space is something real and extended.

289. To this argument, which comprehends every thing that can be said in favour of the reality of space, I answer, that this interval is in nothing real different from distance: and this latter, indeed, is measurable by means of a solid line, reaching from one of the distant bodies to the other, and consequently extended. To such a line measures may be applied; but, without conceiving such a line,

a line,

a line, the measures would be applied to nothing, which is an evident absurdity.

290. Hence we may infer, that, without two bodies at least, there can be no distance, nor, consequently, *space*. Still less can it be supposed to exist, when there are no bodies at all; and, therefore, antemundane and extramundane spaces are merely imaginary.

291. If it be asked, where a single body would be placed, if no other body were created? I answer, *no where*, that is, in no place; *place* being, as Mr. Locke justly observes, (B. ii. Chap. xiii. sec. 7,) the relation of distance betwixt two or more points which are considered as at rest. When, therefore, there are no such points, there is no place; and hence, as he remarks, (ibid. sec. 10,) to say that the world is *somewhere*, means no more than that it does exist, but not its location.

292. I shall now take a retrospective view of the opinions already mentioned, and observe how far they are just, and how far defective.

293. Des Cartes, yielding to the suggestions of imagination, which we need not
be

be surprised at, since it imposed on Newton, Clarke, and, at times, on Locke himself, asserted, that space necessarily implied extension. Now extension is a mere abstraction, and, consequently, can have no real existence. The term *extension* means no more than *extended things*, taken *ad libitum*. Of these, like all other abstract terms, it is a compendious expression. In this respect Des Cartes and his followers reasoned more consequentially than many succeeding philosophers: for he inferred an extended thing, namely, *matter*, to exist wherever space exists; and thence denied the possibility of a vacuum. His opinion having been long since satisfactorily refuted, and now universally abandoned, requires no further notice.

294. Mr. Locke seems at different times to have entertained different opinions of the nature of space; for, after clearly stating, (B. ii. Chap. iv. sec. 2, 3, and Chap. xiii.) that space is the distance between two bodies, or between the parts of the same body, if the body be considered lengthways, (and the same may be said of the parts of the breadth and the thickness, for their extremes also are dis-

tant from each other,) he denies (Chap, xvii. sec. 20,) that matter is any way necessary for the existence of space: and thus the notion of distance is completely abandoned. To this persuasion he was led, by the supposition, that if a man were placed at the extremity of the material universe, and stretched out his arm, his arm would still be in space. But this is an evident mistake: his arm would be in nothing, or surrounded by nothing; but different parts of his arm, being at a distance from his body, would form a solid space. And hence Locke himself allows, that the world is, properly speaking, *no where*, as already mentioned; though, in a sense which he justly calls confused, he allows it may be said to be in the space which it takes up, which is thus improperly distinguished from its extension, that is, the distance of its parts from each other.

295. Almost all the assertions of Dr. Clarke originated in the erroneous supposition, that space does exist where, in reality, there is nothing at all.* He supposed it to exist beyond

* Relations were imperfectly understood by Dr. Clarke. See his Reply to Waterland, p. 310; and see Waterland's Second Defence, p. 323.

the bounds of the corporeal universe, where even distance cannot exist. And this for no other reason, than that he conceived an extension to which he could set no bounds; not recollecting, that this extension was a mere creature of imagination, being barely the idea of visual distance extended at pleasure, and, consequently, derived from a sense, through which the knowledge of extension and distance is acquired only by experienced connexions with the sensations of touch. Whereas it is certain, that a man, born blind, would never imagine space to exist, where there were no objects of *touch* betwixt which a distance might be found. He inferred the necessity of God's existence *every where*, that is, in every *place*, when there was no place whatsoever; and, even if there were places, neither God, nor any spiritual being, can have any proper location. God is omnipresent, by his power, his knowledge, and his operation, and not by the fictitious attribute of immensity, which cannot be distinguished from unlimited extension.

296. Hence, he further asserted, as I have already mentioned, that extension was necessary for every being. An opinion, as Dr. Priestley

Friestley justly observes, at present rejected by the most consistent immaterialists. *

297. How God can act where he is not, is as easily conceived, and as justly admissible, even if inconceivable, as that he knows contingent events that are to happen in times, with which he does not at present co-exist. † As infinite knowledge is sufficient in the one case, infinite power is sufficient in the other.

298. As all the subsequent assertions of Dr. Clarke proceed from the erroneous notions just mentioned, no further notice need be taken of them. But as some of his arguments, in favour of extramundane space, have an imposing appearance, I must shew that they are destitute of any reasonable ground.

* Disquisitions on Matter and Spirit, sec. 6. But he was deceived in conceiving this opinion to be entirely modern; for it was the opinion of Clemens Alexandrinus, 2 Strom. circa Medium; and John Damascene, *De Fide*, cap. xiv. who expressly says, God is no where; and Gregory of Nyssus, *adversus Eunom.* Lib. I. denies that angels, or any intelligent beings, bear any relation to space. Boetius Hebd. says, that incorporeal substances cannot be said to be in any place. The Thomists also hold, that angels cannot be said to be in any place but metaphorically. See Genet, 347, folio.

† See Sherlock on the present state of the Socinian Controversy, p. 98.

299. First, he takes for granted, that if this world be not infinite, it is moveable by the power of God; and, consequently, that there are two places, one from which, and the other towards which, it may be moved.

300. To this I make this short reply: that if there were but one body in existence, there could be no motion; for there can be no motion, where there can be no direction, either upwards or downwards, eastwards or westwards, &c. And as, in the supposed case, these, or any other direction, exist only in imagination, there, and there only, motion can exist. This even the scholastics perceived, of whom Dr. Clarke thought too contemptuously.

301. Further: he thinks it absurd to say, that space is absolutely nothing; for of nothing there is no quantity, dimensions, or property: nor is it a mere idea; for no idea of space can be formed larger than finite, yet space must be infinite. Nor is it a relation of one thing to another, arising from situation or order; for space is a quantity, which situation or order are not.

302. These objections arise from the wrong

notion he held of space : its primary notion is distance. Distance implies an interval between the distant bodies ; which interval, if filled up, is called solid space, and, if unoccupied, is called empty space : but this is nothing real and physical, and, consequently, can have no dimension, or any property ; but in proportion to the distance of the bodies betwixt which it intercedes, a capacity of receiving bodies of certain dimensions is inferred to exist ; not as any thing physical, but as a mere possibility, and, like other relations, existing only in the mind ; but whose foundation (that is, the distant bodies) is physical and real. Distance is a relation susceptible of degrees, and, consequently, of quantity, though order and situation may not.

303. Grotius probably understood the text quoted from St. Paul as well as any man, and was certainly an unprejudiced judge in this case, as he was dead many years before this controversy was started. He tells us, it is an Hebraism ; *in him* ; that is, through him, through God's beneficence we exist : he bestows life and necessary motion, and is near us by his power.

304. On Leibnitz's opinion I need not animadvert: as far as it differs from the notion here given, it is satisfactorily refuted by Dr. Clarke; as may be seen in the preceding pages.

305. Dr. Law's idea of space agrees in effect with mine; yet I do not think it expressed with sufficient accuracy, which seems to give his adversary some apparent advantage.

SECT. IX.

OF DURATION, TIME, AND ETERNITY.

306. Duration is a word applied indiscriminately to the existence of created Beings, and to that of the Supreme Being; but its signification, when applied to the former, is widely different from that which it bears when applied to the latter. When applied to the former, it essentially includes a relation to succession; when applied to the latter, it essentially excludes any relation to succession. It cannot even be called *permanent* or *continued existence*; for, in such expressions, a relation

to succession is implied, during which the existence is continued, repeated, or unaltered: hence no definition common to both can be given. We must, therefore, separately mark what it denotes in each case.

307. *Duration*, when applied to created Beings, denotes co-existence with succession. I say *co-existence*, because such Beings are said to last or endure only by comparison with different parts of succession: a Being that existed only for one instant, that is, the minutest portion of succession, could not be said to have had any duration. Co-existence, with two instants at least, is requisite. Hence Locke justly observes, that we gain the idea (or rather notion) of duration, by reflecting on the succession of our own thoughts; as during this succession we know that we exist.

308. To call duration a continuation of existence, is giving a definition merely verbal; as this barely denotes the signification of the word, and denotes the thing defined only by implication.

309. But as the succession of our thoughts is neither regular nor constant, and must be
unknown

unknown to others, a regular, uninterrupted, and uniformly varied succession, (or, at least, whose slight irregularities are discoverable only at distant periods,) has been universally adopted as the standard; by comparison with whose component parts, the duration or co-existence of all other created beings is determined and measured.

310. It is this succession, or co-existence with it, or some of its periods, that forms what is called *time*; for it is sometimes taken for the mere succession, and sometimes for co-existence with it, or with some of its periods.

311. The standard of succession which most nations have adopted, as a measure of the duration of every thing else, is the apparent, annual, and diurnal, progression of the sun, or the different phases of the moon, or both. Thus years, months, and days, are obtained. The minuter portions, as hours, minutes, seconds, and thirds, are discovered by the help of various machines well known.

312. That time consists of parts ultimately indivisible, is briefly and clearly demonstrated

by Mr. Hume *. “ It is a property insepara-
 “ ble from time, and which in a manner con-
 “ stitutes its essence, that each of its parts
 “ succeeds another, and that none of them,
 “ however contiguous, can ever be co-existent.
 “ For the same reason that 1737 cannot con-
 “ cur with the present year, 1738, every mo-
 “ ment must be distinct from, and posterior
 “ or antecedent to, another. It is certain,
 “ then, that time, as it exists, must be com-
 “ posed of indivisible moments: for if, in
 “ time, we could never arrive at an end of
 “ division, and if each moment, as it succeeds
 “ another, were not perfectly single and indi-
 “ visible, there would be an infinite number of
 “ co-existing moments; which, I believe, will
 “ be allowed to be an arrant contradiction.”
 This last point he proves from Malezieu.
 “ Existence, it is evident, belongs only to
 “ unity, and is applicable to number only on
 “ account of the units it contains. Twenty
 “ men may be said to exist, but it is only be-
 “ cause one, two, three, &c. exist; and if you
 “ deny the existence of the latter, that of the

* Treatise on Human Nature, Vol. I. p. 61.

“ former falls of course. It is, therefore, absurd to suppose any number to exist, and yet deny the existence of units.” But how far this division may extend cannot be perfectly ascertained. It is certain it can be carried far beyond our ideas of it, and that, by our auricular perceptions, it may be carried much further than by our ocular perceptions.

313. Thus, by the experiments of Chevalier D’Arcy,* it appears, that five or six distinct sensations, of a luminous body wheeled about, may be had in one second. But if the velocity of the rotation, and, consequently, the number of sensations, be increased, they cease to be distinct, and a continued luminous circle is formed; but if an opaque coloured body be thus whirled about, a few more distinct sensations may be discerned. Of auricular sensations a far greater number may be distinguished; for our celebrated astronomer, Mr. Herschel, has discovered, that upwards of 160 of them may be discerned in a second of time before they become confused and undistinguishable.† In general, where the

* Mem. Par. 1765.

† See Mr. Watson’s Treatise on Time, p. 32.

greatest attention is not bestowed on the succession, particularly on that of visual sensations, the memory of those immediately past is so vigorous and lively, that many of them are confounded with, and appear belonging to, the present time, taken in the strictest sense. It is on this circumstance that many of the impositions of jugglers are founded.

314. The apparent length of time depends wholly on the attention paid to its succession; it appears short to those whose attention is firmly fixed on one object; for attention to succession, in such case, is as much as possible excluded. It appears still shorter to those who sleep without dreaming or interruption, as they are not conscious of any succession, and judge of the length of time, occupied by sleep, only by the sensations usually associated with rest, and the changes resulting from succession. So also, the duration of an agreeable state of mind appears short, even though it should co exist with many successive perceptions, because the pleasure arising from them, and not their mere succession, is that which chiefly occupies the attention.

315. On the other hand, when the attention

tion is not attracted to any particular perception, but wanders with indifference or disgust from each of the ideas that present themselves, their number is increased; and as the mind flies rapidly from one to another, their number being thus increased, the time appears longer.

316.-For a similar, but a much stronger reason, when we are in a painful state, its apparent duration is much longer than the real: its termination being every instant coveted, the succession of these instants is strictly attended to.

317. A learned and profound metaphysician endeavoured to prove, that, strictly speaking, there is no such thing as *present* time. The question, however, is merely verbal. Undoubtedly, the present, taken in the strictest sense, denotes an indivisible instant, which can neither be called time nor duration; but it is on a perceptible aggregate of such instants, of which the memory is as vigorous, or nearly so, as the sensation corresponding with a single instant, that we bestow the name of *present time* in the usual sense.

318. Another lively, amusing, but eccentric

tric writer, taking it for granted, that time
 consists only in the succession of our ideas and
 actions, asserts, that “ however these may
 “ be accelerated or retarded, time will be just
 “ the same, that is, neither shorter nor longer,
 “ provided the same ideas and actions succeed
 “ one another: as far, I mean, as it relates to
 “ Beings so thinking and acting. For instance;
 “ were the earth, and all the celestial bodies,
 “ to perform the same revolutions in one day
 “ which they now perform in a whole year;
 “ and were all the ideas, actions, and lives of
 “ mankind, hastened on in the same propor-
 “ tion; the period of our lives would not be
 “ in the least shortened, but that day would
 “ be exactly equal to the present year. If, in
 “ the space of seventy or eighty of these days,
 “ a man was born, educated, and grown up;
 “ had seen his children come to maturity,
 “ &c.; and, during this period, had all his
 “ ideas and actions, all his enjoyments and
 “ sufferings, accelerated in the same propor-
 “ tion; he would *not only seem* to himself, and
 “ to all who lived in the same state with him,
 “ and measured time by the same standard,
 “ to have lived as long, but *actually, and in*
 “ *fact,*

“*fact*, would have lived as long as one who
 “ resides on this globe as great a number of
 “ our present years.”—Is not this to say, that
 actually, and in fact, seventy or eighty of our
 days are equal to seventy or eighty of our
 years? It is plain that, even if the hypothesis
 were possible, it is only in *appearance* that an
 equality could subsist between them. But
 the hypothesis itself is grounded on no ana-
 logy whatsoever; to deduce any consequences
 from it is, therefore, an idle attempt. Judg-
 ing from experience, we find that violent pain
 or anxiety, and not the mere number of suc-
 ceeding ideas, apparently lengthens our no-
 tion of duration, or makes us think time
 longer than it really is. The number of
 ideas that occupy our imagination in reading
 an agreeable book, nay, the number of letters
 of which each line of it consists, and which
 must successively be perceived, must be very
 considerable; and yet the time seems short
 while we read it.*

* Whoever wishes for a more ample account of *Time*,
 will receive abundant satisfaction on perusing the profound,
 and yet perspicuous, treatise of Dr. Watson, jun. on *Time*,
 published by Johnson in 1785.

Eternity.

Eternity.

319. *Duration*,* when that of the Supreme Being is meant, denotes existence exempt from any commencement or termination. This mode of existence is what is commonly called *eternal*. It is incomprehensible and inconceivable, but implies no contradiction; for the notion of existence, and that of absence of commencement, and termination, are so far from being contradictory to each other, that a being, so circumstanced, has been demonstrated to exist.—It is intelligible, though imperfectly.

320. By this definition it appears, that succession is essentially excluded from the notion of eternity; for succession necessarily implies a beginning, as will presently be seen. And, yet, eternity cannot be said to be a *perpetual instant*, as some have called it; for that is an express contradiction, and even more glaringly contradictory, than the *punctum stans* of some scholastics; for *instant* denotes the minutest portion of time or duration, and *perpetual*, the greatest duration.

* See Waterland's *Queries*, p. 121.

321. Hence, we may learn the true import of some usual expressions.

322. *From all eternity* ; that is, without beginning.

323. *To all eternity* ; that is, without ever ending.

324. Hence, also, we may collect, that eternity cannot be called a *quantity* ; for its notion implies no magnitude whatsoever, but barely existence unlimited ; and, therefore, cannot be said to be infinite, nor even equivalent to an infinite succession ; for such a succession is impossible, and purely chimerical.

325. The notion of eternity is positive, and not merely negative, as Locke supposes, though it includes a double negation. For notions that are commonly called negative,* or privative, are those which directly import the non-existence or absence of something positive as *darkness* does that of light, *silence* that of sound, *death* the cessation of life, &c. : whereas *eternity* directly imports existence ; and, in-

* I have substituted the term *notions* for that of *ideas*, which Locke has employed too generally. The word *idea* should never be used to denote any thing, but representations of objects perceived by sense.

directly, the absence of a positive, relation, namely, a beginning; and, also, of something negative, namely, a termination: or, in other words, existence unoriginated and interminable. It cannot be even called continued existence: for continuance implies a beginning, an existence begun, and thenceforward prolonged.

326. The Supreme Being, to whom alone the notion of eternity is applicable, having bestowed existence on other beings; on comparing the commencement of these, with the existence of that Being, from whose will and power they originated, the relations of the priority of the latter, and the posteriority of the former, necessarily arise. Now, priority and posteriority constitute succession: but this succession is not that of *time*; for, in this, the prior parts of the succession, instantaneously become *past*; whereas, in the former, the prior existence is constant and unaltered. The interval betwixt both is unmeasurable; as we have no standard, nor indeed is any possible, which can be applied to it. Thus, we cannot say, that the existence of God preceded that of any created being,

being, a million of years, or only a single instant ; as the quantity of the interval, or distance, is necessarily unknown.

327. Hence the question, whether God could not have created the universe sooner, implies an absurdity : for the word *sooner* expresses a comparison of times ; whereas *time* began only on the creation of succession.

328. In reply to some captious questions, it should be observed, that, since the creation, the duration of God co-exists with succession. Hence though it cannot be said, that the duration of God has now subsisted longer than it has done, at any other period, subsequent to the creation ; yet it may be said, that its co-existence, with created beings, is now longer than it was at any period preceding the present.

329. The only important point, that now remains to be considered, is, whether any created being ~~could~~ have been eternal ; as some imagine the universe, or at least some part of it, to have been ? To me it appears sufficiently clear, that creation and eternity, exclude each other. Creation implies, at least, an instant, in which the created being did not exist : otherwise existence could not have been bestowed

flowed upon it; it must, therefore, have had a beginning; whereas eternity excludes a beginning.

In answer to this, it has been said, that, if the sun were eternal, its light would also be eternal, though produced by it. But it is easy to see, that, if the sun were eternal, its light would indeed be eternal;* because the sun is essentially lucid; for without light it would not be a sun. But it does not follow, that the light was produced by it, but rather that both were co-existent; the one being included in the notion of the other. This cannot be said of the notion of the Supreme Being, and any creature; for he may well be conceived to exist, without creating any being whatsoever.

Another much more plausible objection is made by the scholastics. The existence of the world, say they, is eternally possible; and the Divine Omnipotence is also eternal: all which is true. But their inference, that the effect, resulting from an eternally omnipotent cause, could also be eternal, is inadmissible; as causation essentially requires priority of ex-

* See Clarke's Reply to Waterland, p. 253.

istence : without priority it could not be understood ; it would be perfectly unintelligible. — And the reply they make to this exactly confirms it ; for they say, that priority of *nature* is sufficient. Now, what else is priority of nature, but that priority, which the nature or notion of causation essentially implies, namely that of existence ? Any other feigned priority is unintelligible. — Their further assertion, that, according to this statement, an infinite succession of ages must have been possible, before the creation of any being, is perfectly chimerical : not only because the interval betwixt the creation, and the pre-existence of the Creator, is unknown, as already said ; but also, because an infinite succession is impossible, even in the divine ideas ; a commencement being essential to succession, as I shall now demonstrate.

332. Mr. Locke says, we derive the idea of eternity from those of succession, and duration, by adding the periods of duration as often as we please ; and thus suppose it a duration exceeding as many such periods as we can reckon,* without ever coming to an end.

* B. II. c. xiv. sec. 28, 31, 32. and c. xvi. sec. 3.

Now, it seems to me very clear, that this is rather a fruitless attempt to gain an idea, or rather notion of eternity, than an actual acquisition of that notion : for, after all these attempts, we are as far from gaining it as we were at first ; as he himself acknowledges. Hence he thinks, that “ if we cannot separate
 “ succession from any duration whatsoever,
 “ our idea of eternity can be nothing but that
 “ of infinite succession of the moments of du-
 “ ration, wherein any thing does exist.”*

333. The notion, however, of an actual infinite succession of moments implies an evident absurdity : for such a succession should consist of as many years, nay millions and centillions of years, as it should of moments ; and thus the whole, and the parts composing the whole, would be equal. If we suppose an infinite number of years, assuredly the number of moments, of which those years consist, must be still greater, and exceed infinity ; which is absurd. Thus, if an infinite succession of moments had passed before the creation of the world, must it not be in-

* Chap. xvii. sec. 16.

creased by the number of them that have elapsed betwixt that time and the present.*

334. And, as to the eternity of our world, let it be considered, that motion, namely, a successive progression round a common centre, is necessarily attributable to those planets, which form what we call the world: and that our globe, in particular, includes numberless beings that exist in endless succession to each other. Now, an unoriginated, or eternal succession, implies an absurdity, as has been just shewn; and may be further demonstrated: thus,

335. From the motion of the earth, for instance, round its axis, and round the sun, the succession of days, nights, and years, originates. Now, the days necessarily precede the years; therefore, the years must have had a beginning, and could not, therefore, have been eternal. In like manner, the days must have preceded the nights, or the nights the days: one or other of them must, therefore,

* Nothing can be more absurd than Dr. Clarke's objections to these arguments: he regards mathematical lines, points, and surfaces, as realities, though they are nothing but mere abstractions. See *On the Attributes*, p. 10 and 34.

have had a beginning. Moreover, no portion of time can be said to be *past*, that was not once *present* and antecedently *future*; therefore the whole infinite collection must be supposed to have contained an infinite number of days and years *past*, and the same infinite number of days and years *future*; which is a contradiction so palpable, that Doctor Gregory Sharpe* found no other way of avoiding it, than by asserting, that there is, or was, a time, now actually *past*, that never was present; which is equivalent to saying, that a time *has* existed, which never *was* in existence.

336. The opinion of some scholastics, that eternity is a *punctum stans*, or a permanent moment, being utterly unintelligible, is, I believe, at present generally abandoned.

* See his Defence of Dr. Clarke's Discourse, on the Attributes, &c. p. 27.

SECT. X.

ON HUMAN LIBERTY.

337.—I. *Power* denotes the principle of action. Action denotes the *exercise* of power; or, rather, *action* denotes that disposition of a being through whose intervention a change happens. The possession of that internal disposition is called *power*.

338.—II. *Necessity* denotes the conceived *impossibility* of the non-existence of any thing.*

339.—III. Hence necessity is of three kinds; metaphysical, physical, and moral.

340. An object is said to be *metaphysically* necessary, when its absence involves a contradiction; and to be *physically* necessary, when its non-existence contradicts the established laws of corporeal nature, or when it cannot fail to exist, or cannot exist otherwise than it does without a miracle.

341. Lastly, that is said to be *morally* necessary, whose non-existence is contrary to

* Dr. Priestley, Vol. VI. p. 172, defines it *the cause of constancy*, but erroneously; the cause of constancy in moral actions is the superior apparent eligibility of the motives; *necessity* is a mere negation, and therefore cannot be a cause.

the laws by which moral agents constantly and universally govern their conduct. On the other hand, we call that future object *certain* which will not fail to come to pass.

342.—IV. Hence certainty differs from necessity in this, that what is necessary *cannot*, and what is certain *will not*, fail to happen. What is necessary is certain, but not *vice versa*.

343.—V. A power is said to be *free*, when its exercise in every sense is morally possible.

344.—VI. *Will, or the power or faculty of willing*, is said to be *free*, when it may act or not act, or *elect*, without the constraint of moral necessity; for no other can be applied to the will. The application of this definition requires some further observations.

345.—VII. First, we must observe, that the will can form no volition, but with a view of obtaining some *good*, either real or apparent. For all rational agents *necessarily* covet happiness, and esteem that to be good which promotes or constitutes any degree of happiness, and consequently pursue it with an ardour proportioned to the degree it exposes to their view. A volition, like every action, requires a sufficient reason for its existence; and in this case, none can be adduced but the attainment

tainment of some degree of happiness. The good or advantage, thus held forth to the mind, is called the *motive*, or final cause of its action. But the efficient cause of the volition is the mind itself; the term *motive* is in some degree improper, as it conveys the idea of activity, whereas it is, in reality, passive, being the term towards which the mind moves, or from which it recedes.

346.—VIII. Secondly, as the will can never act without a motive, the *connexion* between a volition and some motive is metaphysically necessary, it being grounded on the very nature of the mind, or of an intelligent agent, which cannot act but with a view of obtaining happiness. But with respect to *particular motives*, the following distinctions are to be observed :

347.—IX. If the good presented to the mind be apparently *infinite*, its connexion with a correspondent volition is then morally necessary; but if the good presented be *finite*, the connexion must be weaker; but still, as it is no less real since it exists, it is *certain*.

Note.—Certainty is an ambiguous term, as it sometimes denotes the reality of an object; sometimes the foundation or cause of that reality; and sometimes the firm persuasion of
• L 4
the

the mind of the reality of an object: here it is employed in the first sense, and sometimes in the second, but never in the last. In the first sense it is opposed to *unreality*, or *non-existence*; in the third, it is opposed to *uncertainty*, or mere probability.

348.—X. Necessity and contingency are opposed to each other, as contingency denotes the mere possible existence or nonexistence of an object in any future time; but the opposite of certainty is *unreality*.

349.—XI. Hence we may observe a gradation in the strength of the tendency of the mind towards the motives that are presented to it from that which is infinitely strong, and therefore produces a moral *necessity* to that which is indefinitely weak, but whose connexion with volition is nevertheless *certain*. To attribute a pursuit equally strong to motives of apparently unequal appetibility is evidently absurd; yet this the necessitarians are forced to maintain, as necessity admits of no degrees. The strength or force of motives, or, more properly speaking, their appetibility, evidently results from the degree of *apparent good* which they present.*

* Hence also the guilt of all crimes is diminished in proportion to the force of the temptation that led to them.

350.—XII. But it may be replied, that neither can reality admit of different degrees, nor, consequently, can certainty. This is true with respect to the first sense, but not with respect to the second sense of that word; for the foundation of certainty is so much the stronger as it approaches more to necessity.

351.—XIII. If ends or motives, *apparently equally* desirable, but suggesting different or opposite volitions, be presented to the mind; and if both present a greater good than that resulting from remaining in its actual state by embracing neither; in that case, the mind may tend to either, that is, may form a volition to obtain the good presented by either. For, though there be no *direct* reason for preferring either, yet the good presented by each is a sufficient, though indirect, reason for pursuing that presented by any of them; and the impossibility of pursuing both is a sufficient reason for pursuing one of them.* Yet, probably, some *extrinsic* reason generally suggests the choice; such as, that one of them was first thought of, or last thought of, &c.

352.—XIV. If motives, *apparently unequally*

* This is contradicted, 1 Leib. ccxv.

desirable,

desirable, be presented to the mind, then, if the inequality be *infinite*, the mind will *necessarily* pursue the most desirable, for the reasons already given.

353.—XV. If the inequality be *finite*, it frequently happens that, by considering them in different points of view, their appetibility may be inverted, the *most* desirable being in some respects the *least so*, and the least desirable appearing in some lights the *most so*. Hence the mind is free to pursue either, from the intrinsic good each holds to its view. But if the inequality be finite, and also their appetibility, the liberty of choice is proportionably diminished.

354.—XVI. This inversion becomes so much the easier as the inequality betwixt the proposed motives is apparently smaller; and so much the more difficult, as the apparent inequality is greater. And hence we perceive the benefit of instruction, as by its means the *apparent* inequality approaches indefinitely to the *real*.

355.—XVII. Motives are presented to the mind either by sensation, imagination, passion, sense of duty, fear of remorse, or moral instincts. In general, those presented by the three first
modes

modes of perception, are most pursued, because in receiving them the mind is entirely passive, and their rejection is attended with a greater or lesser degree of pain; whereas the comprehension of the latter, in their full substantial view, requires attention and self-command, which are opposed by the natural indolence of the mind, though the importance of the determination to be taken strongly indicate the propriety of applying them, and though the understanding pronounce the pursuit of the object they suggest to be in some respects the greater good. Hence the saying of Medea, *Videor meliora*, &c.

356.—XVII. The difficulties in which this subject has hitherto been involved, have arisen in great measure from the improper expressions used in treating it; most of which are, in their literal sense, applicable only to corporeal nature, which is passive, and therefore suggest false conceptions when applied to mind, which is essentially active. Thus *motives* seem to imply something active, whereas they are, in reality, passive, being the ends which the mind pursues, or may pursue. They are said to *impel* the mind to action, which

which again falsely denotes activity, whereas the mind naturally *pursues* them in proportion to the apparent good they present. Thus also *force* and *strength* are improperly applied to them.

357. I shall now proceed to obviate the objections to human liberty, advanced by Dr. Priestley, who, of all others, has stated them with most clearness and precision, occasionally noticing any thing further relevant to the subject, that has been advanced by other writers.

358. The Doctor (in p. 7 of his Illustrations of Philosophical Necessity,) tells us, "that the liberty he denies to man, is that of
 "doing several things, when all the previous
 "circumstances (including the *state of his*
 "*mind*, and his *views of things*,) are precisely
 "the same;" and asserts, "that, in the same
 "precise state of mind, and with the same
 "views of things, he would *always* voluntarily make the same choice, and come to
 "the same determination."

359. By views of things, the Doctor evidently means motives, and consequently, in some cases, namely, those mentioned in IX.
 and

and XIV. his assertion is perfectly just, the motive being there supposed to be infinitely desirable. But in most cases, as those mentioned in XIII and XV. it may be true, and it may also be false; for as in those cases the reasons for opposite determinations are apparently equal, the mind may *at one time* form one choice, and at another time another; or it may *always* form the same, or each time a *different*.

360. The Doctor also says, “ he allows “ to man the liberty of *doing* whatever he “ pleases;” but the liberty here meant is not the liberty of performing any external action, but the liberty of willing or chusing.

361. Mr. Locke seems to think, that the will cannot properly be said to be free; because “ liberty (he says) is but a power belonging to agents, and cannot be an attribute “ or modification of will, which is also a “ power.” But liberty is not merely a power, but a species of power, as power may be exerted either necessarily or freely.

362. To establish his conclusion, Dr. Priestley lays down some observations relative to cause and effect, which, being solely applicable
to

to corporeal nature, I omit. He then tells us, (p. 13,) “ that a particular determination of
 “ the mind could not be otherwise than it
 “ was, if the laws of nature be such, as that
 “ the same determination shall constantly
 “ follow the same state of mind, and the
 “ same view of things; and it could not be
 “ possible for the same determination to have
 “ been otherwise than it *has been, is, or is to*
 “ *be*, unless the laws of nature had been such,
 “ as that, though both the state of the mind
 “ and the views of things were the same, the
 “ determination might, or might not, have
 “ taken place. But in this case the determi-
 “ nation must have been an effect without a
 “ cause; because in this case, as in that of a
 “ balance, there would have been a change
 “ of situation without any previous change of
 “ circumstances; and there cannot be any
 “ other definition of an effect without a
 “ cause.”

363. To this reasoning I reply,—that the laws of nature, with respect to intellectual agents, are such, that, though the state of mind and the views of things be exactly the same, one and the same determination might
 not

not have taken place in the cases mentioned in XIII. and XV.: and yet, whether the same or a different determination take place, it will not be an effect without a cause; for as in those cases different motives or final causes, equally attractive, are supposed to occur—whichever of them the mind pursues, its determination will not want a final cause. The comparison of a balance, which will remain in equilibrio when the scales are loaded with equal weights, is inapplicable, as the balance does not act, but is acted upon; whereas the mind is evidently possessed of an active power of pursuing a proposed end.

364. The Doctor further adds, (in his reply to Mr. Palmer, p. 7,) “that certainty, or
 “universality, is the only possible ground of
 “concluding, that there is a necessity in any
 “case whatever;” which is true, as far as respects corporeal nature. But, with respect to intelligent beings, the perceived connexion betwixt their actions, and a superior *degree* of apprehended happiness, is the true ground of the necessity of their volitions when they are necessary, as shewn, IX. and XIV.; which, indeed, may be indicated by constancy and
 universality;

universality; and where this ground does not exist, certainty (with respect to our knowledge) cannot be obtained.

365. The next argument, in proof of the necessity of human actions, is derived from divine prescience. Dr. Priestley states it thus: "As it is not in the compass of power
 " in the author of any system, that an event
 " should take place without a cause, or that
 " it should be equally possible for two events
 " to follow in the same circumstances, so nei-
 " ther, supposing this to be possible, would it
 " be within the compass of knowledge to
 " foresee such a contingent event; for as no-
 " thing can be known to *exist* but what does
 " exist, so, certainly, nothing can be known
 " to *arise* from *what does exist* but what does
 " arise from it, or depend upon it. But, ac-
 " cording to the definition of the terms, a
 " contingent event does not depend upon any
 " previous known circumstances, since some
 " other event might have arisen in the same
 " circumstances. All that is in the compass
 " of knowledge in this case is, to foresee all
 " the different events that might take place
 " in the same circumstances; but which of
 " them

“ them will actually take place cannot possibly be known.”—P. 19.

366. In answer to this argument, we must observe, that not only the immensely complicated series and concatenation of events, which we denominate the *actual system of the world*, was originally *barely possible*, but also an infinite number of other systems, differently arranged and equally complicated. In some of these the contingent act appeared linked with one of the motives with which, in the same circumstances, it might possibly be connected; and, in another system, a very different event might arise from the equally possible connexion with the opposite motive, as in the cases N^o 13, and 15. Each of these events would give room to a totally different series of subsequent events; for the greatest and most important arise from others seemingly the least important. Among these different systems God has chosen the *best*, or, at least, *one of the best*; and upon this choice his foreknowledge of that determinate contingent object, which is to happen, to which the Doctor alludes, and where apparently unequal motives do not determine it, is grounded.

367. To this argument Mr. Crombie (in his Treatise on Philosophic Necessity, p. 73,) further adds, that since the Deity foresees future events, they must necessarily take place. But as knowledge of any kind is perfectly extrinsic to the events known, and exerts no sort of influence over them, all that can justly be inferred from the infallibility of divine prescience is, that the event foreseen will *certainly* and infallibly, but not necessarily, happen; for to secure the infallibility of divine foreknowledge, the future existence of the event foreseen, and not the impossibility, whether physical or moral, of its nonexistence, or, in other words, its certainty, but not its impossibility, must be supposed.

368. All the objections, hitherto made to human liberty, seem to me reducible to those I have here noticed. It is needless to adduce any argument in proof of it, as the consciousness of our being ourselves the active principle, from which our determinations originate, and the remorse incident to the abuse of this self-determining power, impress the fullest conviction of this important truth.

person may be older than one man, and younger than another.

190. Fourthly, some subjects of a relation have no correlative name in some languages, to which the relation may be referred, as *concubine*; but the term to which it is referred is understood to exist.

191. Fifthly, there is no one thing soever, whether idea, substance, mode, or relation, which may not be considered in reference to other things; that is, as the subject of a relation.—Locke, B. ii. C. xxv. sec. 7.

192. Most relations may be arranged under two general heads, and their opposites. These are,

<i>Similitude.</i>	<i>Diffimilitude.</i>	<i>Connexion.</i>	<i>Disconnexion.</i>
Identity.	Diversity.	Proximity	Incoherency.
Equality.	Inequality.	in time or	Disorder.
Proportion.	Disproportion.	place.	Opposition.
Analogy.		Order.	Confusion.
		Causation.	Excess.
		Congruency.	Defect.
		Association.	
		Succession.	
		Conformity.	
		Coincidence.	
		Dependence.	

ESSAY II.

CHAP. I.

OF THE HUMAN MIND AND ITS MODIFICATIONS.

369. By the human *mind*, we denote the principle or subject of our perceptions, whether sensations, ideas, notions, thoughts, judgments, volitions, desires, aversions, &c. which we call our *self*, of which we are conscious; we can even infer by reasoning, from the impossibility of the existence of modes without a common subject, that such a subject really exists: by a spirit I understand that indivisible unextended thing which thinks, acts, and perceives. See Berkeley's Third Dialogue, p. 293.

370. Yet Mr. Hume asserts,* “that mankind are nothing but a bundle of perceptions, which succeed each other with an inconceivable rapidity, and are in a perpetual flux and movement.” And again, “we may observe, that the true idea of the mind, is to consider it as a system of dif-

* Treatise on Human Nature, p. 361. 437. 439. 453.

“ferent perceptions or different existences
 “which are linked together, by the relation
 “of cause and effect, and mutually produce,
 “destroy, influence, and modify, each other.”
 These strange assertions are entirely grounded
 on this, that we have no idea of *self*, as if we did
 not know many things of which we have no idea
 in the strict sense of that word; thus we have
 no idea of *joy* or *grief*, *judgment* or *volition*,
 though we well know what those words in-
 dicate.

371. In the delusive plausibility of such
 reasoning, the hyloists,* or supporters of the
 existence of what they call *material substance*,
 loudly triumph, as they think the rea-
 soning of Berkeley against the existence of
 matter, grounded on similar principles, and
 therefore equally visionary and absurd: but
 they are much mistaken; the falshood of
 Hume's reasoning, if it can be so called, is
 demonstrable; whereas it is generally allowed
 that Berkeley's arguments, though (in some
 minds) they produce no conviction, yet ad-

* Such philosophers as admit no other substance but
 matter I call *materialists*, such as admit both matter and
 mind I call *hyloists*.

mit of no answer;* the weakness of the few that were attempted I shall soon shew.

372. But to return to Mr. Hume: Mr. Merian, one of the ablest metaphysicians of the age, has shewn more at large the absurdity of Hume's system, in the *Memoirs of Berlin* for 1793, nearly as follows.†

According to Mr. Hume, we are nothing but an aggregate of phænomena. Now I ask, whether a phænomenon can exist without being perceived? If not, I ask who perceives it? To this question there are but three possible answers; either it is perceived by itself, or by some other phænomenon, or by something that is not a phænomenon. Now a phænomenon perceiving itself, would be strange indeed; sounds hearing themselves. smells smelling themselves, &c.: besides, in this case, there could be no comparison of phænomena, nor consequently any judgment founded on such comparison. Secondly, to say that phænomena can perceive other phænomena, is still, if possible, more absurd;

* 1 Reid, *Intell. Powers*, 237; and *Inquiry into the Human Mind*, last edit. p. 21.

† *Ibid.* 21. 22.

“ferent perceptions or different existences
 “which are linked together, by the relation
 “of cause and effect, and mutually produce,
 “destroy, influence, and modify, each other.”

These strange assertions are entirely grounded on this, that we have no idea of *self*, as if we did not know many things of which we have no idea in the strict sense of that word; thus we have no idea of *joy* or *grief*, *judgment* or *volition*, though we well know what those words indicate.

371. In the delusive plausibility of such reasoning, the hyloists,* or supporters of the existence of what they call *material substance*, loudly triumph, as they think the reasoning of Berkeley against the existence of matter, grounded on similar principles, and therefore equally visionary and absurd: but they are much mistaken; the falshood of Hume's reasoning, if it can be so called, is demonstrable; whereas it is generally allowed that Berkeley's arguments, though (in some minds) they produce no conviction, yet ad-

* Such philosophers as admit no other substance but matter I call *materialists*, such as admit both matter and mind I call *hyloists*.

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* 1 Reid, *Intell. Powers*, 237; and *Inquiry into the Human Mind*, last edit. p. 21.

† *Ibid.* 21. 22.

for instance, smells hearing sounds, sounds seeing colours, &c. ; therefore Thirdly, there must be a subject or *substratum* of these perceptions, of which they are modifications. Moreover, sensations of one sort, are often compared with sensations of another sort, as those of sight with those of hearing : now, can vision judge of hearing ? or colours judge of sounds ? &c. May we not have two simultaneous sensations contrary to each other ? May we not feel extreme heat in one hand and extreme cold in the other ? Can then two contrary sensations co-exist without any subject ? But it were idle to pursue this subject further. Very different, indeed, are the arguments of Berkeley against that fictitious *substratum* called *matter* : how then could Doctor Reid say, that Hume proceeds on the *same principles* as Berkley, but carries them to their full length ? And as the bishop undid the whole material world, this author, on the *same grounds*, undoes the world of spirits, and leaves nothing in nature but ideas and impressions, without any subject on which they may be impressed. That Hume's theory has been
very

very unfairly deduced from Berkeley's tenets, is acknowledged by the candid and judicious author of the *Encyclopædia Britannica*, p. 544.*

* Berkeley himself has long ago anticipated and obviated this objection, in his third Dialogue; thus, “ I know, or am conscious, of my own being; and that I myself am not my ideas, but somewhat else; a thinking, active principle, that perceives, knows, wills, and operates about ideas. I know that I, one and the same self, perceive both colours and sounds: that a colour cannot perceive a sound, nor a sound a colour: that I am therefore one individual principle, distinct from colour and sound; and, for the same reason, from all other sensible things and inert ideas: but I am not in like manner conscious either of the existence or essence of matter, on the contrary, I know that nothing inconsistent can exist, and that the existence of matter, implies an inconsistency. Further, I know what I mean, when I affirm, that there is a spiritual substance or support of ideas; that is, that a spirit knows and perceives ideas. But I do not know what is meant, when it is said, that an unperceiving substance hath inherent in it, and supports, either ideas or the archetypes of ideas. There is therefore, upon the whole, no parity of case between spirit and matter.” P. 297 and 298.

SECT. I.

OF THE MODIFICATIONS OF THE HUMAN MIND.

373. The modifications of the mind, or the various states in which it may exist, have been already enumerated, N^o 369. Our next endeavour should be to classify them, in order to observe in what respect they agree or are distinguished from each other.

374. The first and most general distinction of these modifications; is that of *passive* and *active*.

375. The passive, are those of which the mind itself is not the direct and immediate cause, but which are impressed upon it by an extrinsic cause, which can be no other but the *Supreme Being*; though in many instances the mind, conformably to certain stated laws, may alter, exchange, or extinguish, many of them. Thus while my eyes are open, I cannot avoid seeing one or more of the objects that are before me; but I may, if I please, shut my eyes, and thus extinguish all visual sensations; and by opening my eyes I may renew them again: in this manner the Will
may.

may often be the occasional cause of the existence or extinction of sensations, and other passive modifications.

376. Hence passive Modifications may be called *impressions*: by impression I understand any sensible change produced in a passive subject, by the operation of an external cause.

377. Impressions are either *sensual*, or *sensible*, or merely *spiritual*.

378. *Sensual* impressions are those that are made upon us through the intervening organs of the external senses: they are called *sensations*. Such are those of vision, hearing, smell, tastes, and tact.

379. *Sensible* impressions are those made upon us through the internal organs of feeling; such as those of hunger, thirst, saturation, and other sensations, whether painful or agreeable, and may be called internal sensations.

380. *Spiritual impressions* are those which are connected indeed with corporeal impressions, but in an invisible and unknown manner. Such are ideas, discernment of relations, emotions and passions.

381. All the passive modifications are comprehended

prehended under the general appellation of *perceptions*.

382. The *active* modifications of the mind are only two; the act of *judging*, and that of *willing or rejecting*; which last, when exercised on the proposal of two or more measures, is called *election*, or *preference*.

383. All the above-mentioned modifications have been referred to different capacities or powers; namely, the *understanding*, *memory*, and *will*.

384. Under the head of *understanding*, are placed, sensations, ideas, notions, discernment of relations, and judgment.

SECT II.

OF SENSATIONS IN GENERAL.

385. Sensations are the impressions which we receive from the Supreme Being, through the intervention of the organs of sense; they are also the strongest and most forcible, as they more strongly excite our notice than other perceptions commonly do. On these we may remark,

386. First, that in the perception of sensations, the mind is perfectly passive ; for they cannot be excited by a mere act of the will, as already said : in vain would I seek to obtain the sensation of *redness*, or of any sound, &c. or of hunger, merely by wishing to do so ; but by exercise I may excite, and thus be the occasional cause of the sensation of hunger, and by taking proper means I may obtain other sensations.

387. Secondly, sensations have no object distinct from themselves ; that is to say, they are not representations of any thing ; they can only be said to be perfectly similar to other sensations of the same kind and degree in other minds.* But they are frequently signs of other sensations which may be expected ; thus the smell of a rose suggests the presence of a rose ; the smell of putrid meat announces also its taste, and even occasions a nausea, which is an internal sensation.

388. Thirdly, sensations are also capable of various degrees of intensity, from the faintest, which are capable of being mistaken for de-

* In this I am happy to agree with Dr. Reid. *1 Reid, 276 ; and on the Mind, 146.*

lusions, to the strongest. This often happens when we contemplate very distant objects, or view them through a mist, or in a weak light; as we approach, or the medium becomes more transparent, or the light more copious, the object is more clearly discerned. So warmth may be gradually increased, until from being agreeable it becomes painful. So the feeling of a smooth body may be so increased, as from being gentle and agreeable, to become a painful pressure. So meat may be so far salted or spiced, as from being pleasing to become painful; the same may be said of perfumes, sounds, &c. Hence Dr. Crichton justly observes, that pleasure differs from pain only in degree:* but such degrees may exist independently of each other.

389. Fourthly, the mind may experience different sensations at the same time: thus I may see the moon, smell a rose, taste honey, and hear sounds at one and the same time: nay, I may feel opposite sensations at the same time: thus, if I warm one of my hands and cool the other in snow, and then dip both in

* I. Crichton on Mental Derangement, p. 127.

lukewarm water, the warm hand will feel it cold, and the cold hand warm.

390. Fifthly, a group of sensations received through different senses, but connected with, dependant on, and referred to each other, receive the same name : thus, the assemblage of a certain colour, of a certain peculiar smell, a certain shape and figure, and a certain flexibility, smoothness, &c. is called a *rose*: its properties, when chymically treated, are more numerous, but they are all connected with and referred to those first mentioned ; inasmuch, that if the smell was taken away, or different, the other sensations remaining unaltered, the group would no longer bear the same name, or it would have some addition tacked to it, as a *musk rose*, &c. ; so also if the number of its petals, or *stamina*, were altered.

391. So also water, whether hot or cold, retaining the same external appearance, is still called water ; but if converted by heat into *steam*, or by cold into *ice*, it no longer bears its original name, though again reducible to its pristine state ; its constitution therefore remains unaltered in these different states, which are then merely contingent ; but its
constituent

constituent ingredients are deemed its essence.

392. In the same manner an aggregate of appearances perceived by the senses of seeing and touch, as a peculiar colour, lustre, malleability, extensibility, and comparative weight, together with the exhibition of various other properties, when chymically treated, is known by the name of gold, or silver, &c. as the case may be ; and it retains the same appellation, whether cold and solid, or liquified by heat.

393. The same remark extends to all other mineral, vegetable, or animal bodies ; the aggregate properties perceived by the senses, in the same circumstances, are the only which form the complex object to which a name is given ; nothing else is found, or can be found, through the medium of the senses ; so that if we had ten more senses they could convey to us nothing more than new sensations ; but could not inform us of their cause, which must be inferred by reason, and can be no other than the Supreme Being, or other beings conforming to the laws he has prescribed.

394. Each of these sensations, considered singly,

singly, are called the qualities of that to which they are referred.

395. Sixthly, as all sensations are impressed on our minds by the Supreme Being, they must be known to him, not by organs of sense, of which he has none, but in a manner to us inconceivable: the same changes therefore which, conformably to his laws, take place in our minds, are perceived by him, whether perceived by us or not. That his mode of knowledge is to us inconceivable, is, besides other reasons, evident from this, that he knows *pain*, even the most extreme, without feeling it; whereas, if we had never felt it, we should never know it. The modifications of our minds should, in case they existed in them, undergo various changes, by reason of the progress, interference, or opposition, of the laws by which they are governed, or to which they are exposed: in the Divine intellect corresponding variations take place; nor do such variations derogate from his essential perfections, as they neither add to nor detract from any of them. That such variations are not incompatible with his immutability, is evident, since he possesses now, as
he

he did from all eternity, the most perfect freedom; which essentially requires a power of changing his determinations at present, equally as at any antecedent imaginable period of his existence.*

SECT. III.

OF ODOURS, SOUNDS, AND TASTES.

396. The sensations of smells and sounds may exist in the mind without any reference to a particular object: thus I may perceive a smell, without knowing with what tangible sensation it is connected: thus the savage boy of Aveyron did not turn his head on hearing a pistol fired just behind him; but by experience a connexion, more or less perfect, is acquired.

397. That both these sensations can exist only in the mind that perceives them, is now universally allowed; that they are not images or representations of any external object, is also acknowledged; yet they are so connected

* This is owned by many of the scholastics. See Segui, *Metaph.* vol. ii. p. 97.

with tangible sensations, either perceived or suggested, that their intensity increases in proportion as their distance from the tangible sensations decreases: and hence they are supposed by many to issue from them. But this is impossible; for one sensation cannot issue from another, from which it is specifically different; as well might tastes proceed from light: they relate to organs totally different. Nor can they be said to be caused by any tangible objects, as Dr. Reid, the ablest defender of hyloism, candidly avows. * What we call natural *causes*, may with more propriety, the Doctor says, be called natural *signs*; and what we call *effects*, are the things *signified*. What we call causes, he adds, have no natural efficacy or causality, as far as we know: all we can certainly affirm is, that nature (God) hath established a constant conjunction between them and the things called their *effects*.

398. In the case before us, the connexion betwixt odours or sounds with tangible ob-

Inquiry into the Human Mind, Chap. v. sec. 3.
p. 112

jects is such, that variations in the state or species of the former are consequent on, and correspond with, the variations in the state of the latter: thus the smell of a rose suffers some alteration when the rose is dry, or heated to a certain degree, and is destroyed when the heat is further increased: thus the smell of wine is changed when it becomes vinegar; as is that of meat as it enters and proceeds in the putrefactive process; so the sound of a chord alters with its extent and tension, &c. And not only tangible, solid, sonorous objects, are thrown into a vibratory motion, but oscillations, or undulations, are produced in the air that communicates with them which reach the ear, after which the sensation of sound arises, which has no resemblance whatsoever with these motions.

399. So the vapour of essential oils strikes the glands of the nostrils before any smell is perceived, though this vapour is imperceptible by the sight or the hand; yet it is perceived by the nose and fauces, as distinct from the smell.

400. *Tastes* to be perceived require contact with the tongue or palate, or stomach of objects,

objects; that is, sensations, still more perfectly tangible, whether solid or liquid.

401. To investigate more minutely the processes that precede the sensation peculiar to each of the senses, is needless in a metaphysical treatise. Whoever wishes an exact detail will find it in Doctor Crichton's truly philosophical Essay on Mental Derangement.

402. Hence we see, that a tactile sensation, that is, a sensation perceived by the tact of the organs, or any of the senses, must in all cases precede the sensations peculiar to that sense: and hence, though it cannot be called the *efficient* cause, yet it may be the *occasional*, or *conditional*, cause of that sensation.

SECT. IV.

OF VISUAL SENSATIONS.

403. It is quite unnecessary to give here any detailed account of the structure and admirable mechanism of the organs of sight, as it is now universally acknowledged, that their structure cannot explain how visual sensations are obtained.* Yet these organs, and the in-

* Porterfield, Stewart, Crichton, Condiliac, &c.

tegrity of their structure, are conditions necessary to the attainment of those sensations, as is evident by the cessation of these, when those are disturbed or injured. The same may be said of the organs of all the other senses.

404. The sensations of *light* and *colours*, with their intermediate shades and degrees, are alone immediately perceived by the mediation of the organs of sight; and hence called its proper *object*: just as *sounds* are the proper object of *hearing*; and as *extension*, *motion*, *heat* and *cold*, &c. are the proper objects of the *touch*, or sense of *feeling*; because immediately perceived by the mediation of the organs of that sense. Yet, plain and evident as this is, most philosophers have, in some cases, greatly misapplied this term; for they have considered the objects of a sense as something distinct from the sensation obtained through that sense, though, in other cases, they allow the object cannot be distinguished from the sensation. Thus most philosophers, since the time of Descartes, and Mr. Locke in particular, allow that colours, smells, and sounds, are nothing in their *objects* themselves.

selves, but only *powers* to produce those sensations in us.* Yet these powers, not being immediately perceived, but only inferred, (no matter, at present, whether properly or improperly,) cannot be called the object of any sense—no more than a sword can be said to be the object of the painful sensation a wound from it inflicts. Yet Dr. Reid thinks he perceives matter *objectively*.—1 Reid, 265. But what he calls *perception*, turns out, when examined, to be an act of judgment at most, and hardly even that; and what he calls its *object*, a mere inconsistent notion, for which he can find no other name than *a something*, as will be shewn in the appendix to this essay. He allows that *sensations*, which he in vain endeavours to distinguish from perceptions by sense, have no object distinct from themselves.—1 Reid, 53, and 55.

405. Though *light* and *colours* alone are the immediate objects of sight, yet, by long and deep-rooted associations with the objects of touch, and certain sensations of the tactile kind in the eye itself, many other objects, which properly belong to the touch, are in-

* Locke, B. ii. Chap. viii. sec. 14.

stantaneously suggested to the mind, and their existence, either actual or future, inferred. These objects are *distance*, tangible *extension*, *magnitude*, *situation*, *motion*, *figure*, and frequently *weight*: what species of perception is thus suggested, seems to me well explained by Professor Stewart.* He tells us, that the qualities, which are the proper and original objects of sight, are first perceived; and, secondly, a conception is had (that is, an idea,†) of those tangible qualities, of which the original perceptions of sight are found from experience to be the signs. The perceptions, therefore, we have, by means of the eye, of the tangible qualities of bodies, and of the distances of these bodies from the organ, are mere *ideas*, strongly, and indeed indissolubly, associated, by early and constant habit, with the original perceptions of sight.

* Philosophy of the Mind, 148, &c.

† By conception, he means that power of the mind which enables it to form a notion of an absent object of perception, or of a sensation which it has formerly felt, p. 133: this is more commonly called an *idea*. I have also substituted perception for *notion*, as more agreeable to my definitions; and the sense not altered.

406. When we open our eyes on a magnificent prospect, the various distances at which its different parts are placed from the eye, and the immense extent of the whole scene before us, seem to be perceived as immediately and as instantaneously by the mind, as the coloured surface; the truth however unquestionably is, that this variety of distance, and this immensity of extent, are not *objects of sense*, but of *idea*; and the perceptions we have of them when our eyes are open, differ from those we should have of them with our eyes shut, only in this, that they are kept steadily in the view of the mind, by being strongly associated with the *sensations* of colour, and with the original perceptions of sight; this observation will be more readily admitted, if it be considered, that by a skilful imitation of a natural landscape, in a common show-box, the mind may be led to perceive the same variety of distance, and even of immense extent, as if the original scene were presented to our senses: and that, although, in this case, we have a *speculative* conviction that the sphere of our vision only extends to a few inches, yet so strong is the association

between the original perceptions of sight, and the ideas which they habitually suggest, that it is not possible for us, by any effort of our will, to prevent these ideas from taking place.

407. Besides the visual sensation called *light*, there are tactile sensations, also, called light, or rays of light, perceptible by contact with the organ of sight, which are distinct from, and precede as usual, the visual sensation: this is evident from the injury which the organ suffers by exposure to a superabundance of those rays. Some of them always remain in the organ. When these sensations are combined, they precede the mere sensation of light; but when separate, they precede the sensation of various colours; and hence they are called *colorific rays*, or *prismatic colours*, as their separation is more distinctly effected by a prism; though, in fact, only the tangible sensations are thus separated: but they are followed by the visual.

408. Though *colours* form the proper object of sight, yet, by their early and constant association with certain tangible objects, of which they are only the signs, they are, in appearance,

appearance, spread over them, and seem to inhere in them ; but this mistake has long since been detected by Descartes, Malbranche, and Locke. In effect, colours vary with the distance of the tangible object, with a depravation of the humours of the eye, by the light of the moon, or of candles, or various artificial means : thus mountains, though green when near, appear blue at a distance ; a cloud, though red at a distance, appears but a dark fog when near : all objects seem yellow to a jaundiced eye, or seen through a yellow glass ; or red, when seen through a red glass ; and light blues appear green by moon or candle light : and let it not be said, that these colours are not real, but merely artificial ; for, as Berkeley justly remarks, must not those colours be deemed the most true and real, that are discerned by the sharpest sight ? Now, it is certain from dioptrics, that microscopes make the sight more penetrating, and represent objects as they would appear to the eye, in case it were endowed with the most exquisite sharpness ; yet they often discover colours in an object different from those perceived by the unassisted sight ; and in case we had microscopes,

scopes,

scopes, magnifying to any assigned degree, it is certain that no object whatsoever, seen through them, would appear in the same colour which it exhibits to the naked eye ; hence we may conclude, that colours are not really inherent in tangible objects, but perfectly dependant on circumstances ; and, to say nothing of our dreams, the colours seen in a common mirror are sufficient to persuade us, that they have no necessary connexion with the tangible objects they apparently invest.

409. I now proceed to the secondary objects of sight, *distance*, visible *magnitude*, *figure*, *situation*, and *motion*, of which I shall give a summary account ; first from the fourth dialogue of Berkeley's Minute Philosopher, and subjoin thereto a fuller, from his Essay on Vision. There will be some repetitions, but in treating a matter so abstruse, they will not be found useless.

410. *Distance* is a line projected endwise to the eye. Now a line in that situation can project no more than one single point on the bottom of the eye ; the appearance therefore of a long or short distance is of the same magnitude, or rather of no magnitude at all, being

ing in all cases a single point : hence distance is not *immediately* perceived by the eye, therefore it is by the mediation of something else. To discover what this is, let us examine what alteration there may be in the appearance of the same object placed at different distances from the eye. Now I find by experience, that when an object is removed further and further in a direct line from the eye, its visible appearance grows lesser and fainter, and this change of appearance being proportional and universal, seems to be that by which we apprehend the various degrees of distance ; yet littleness or faintness, in their own nature, have no necessary connexion with greater length or distance; they could not therefore suggest it but from experience ; consequently we perceive distance by a sign which has no likeness to it, nor necessary connexion with it, but which suggests it from repeated experience, as words do things.

411. Distance is not estimated by the obtuseness or acuteness of angles, for the angles themselves are not perceived, and therefore nothing can be inferred from them : from all which it follows, that a man born blind, and afterwards made to see, would, upon first receiving

receiving his sight, take the things he saw not to be at any distance, but in his eye, or rather in his mind.

412. Strictly speaking, the tower or object I see at a great distance, is not the same as that which is seen when near; the former is a little round thing, the latter a great square building; and surely a round thing cannot be exactly the same as a square thing.

413. Hence the variations of visible objects form a language adapted to suggest the distance, figure, situation, and dimensions of tactile objects; not by similitude, nor by the arbitrary interposition of providence; but just as words suggest things signified through the ear, by experience and habit.

414. Hence a person newly made to see, would never think of men or trees, or other objects, which he had been accustomed to know by touch, upon having his mind filled with the new sensations of light and colours, whose various combinations he doth not as yet understand, no more than a Chinese upon first hearing the words

words *man* and *tree*, would think of the things signified by them.*

415. The tactile objects thus suggested are said to be *seen*, because their visible signs being little attended to in themselves, or for their own sake, but considered chiefly in their relative capacity, it comes to pass, that the mind often overlooks them, and carries its attention immediately to the object signified: thus, in reading, we run over the characters with the slightest regard, and pass on to the meaning: hence we often say, we *see words* or even *things* in reading, whereas, in strictness, we see only the written characters which suggest those words: so men overlooking the immediate and proper objects of sight, carry their attention onward, to the tangible objects which are the things signified, and talk as if they saw them, whereas in truth they are only suggested or apprehended, by the proper objects of sight, which alone are seen; this connexion we learn of ourselves, and from our earliest infancy.

* These predictions were verified by Cheselden's experiment, nineteen years after this was written by Berkeley; and lately by Dr. Home, Phil. Trans. 1807. p. 83.

*From Berkeley on Vision.**

§ 3.

416. It is acknowledged, that the estimate we make of the distance of objects considerably remote, is rather an act of judgment, founded on experience, than of sense. For example, when I perceive a great number of intermediate objects, such as houses, fields, rivers, and the like, which I have experienced to take up a considerable space, I thence conclude, that the object I see beyond them, is at a great distance. Again, when an object appears faint and small, which at a near distance I have experienced to make a vigorous and large appearance, I instantly conclude it to be far off; and this, it is evident, is the result of experience; without which, from the faintness and littleness, I should not have inferred any thing concerning the distance of objects.

* I have taken the liberty to alter some expressions, by reason of the permission he gave, sec. 120, but in entire conformity with his sentiments.

§ 4.

417. But, when an object is placed at so near a distance, as that the interval between the eyes bears any sensible proportion to it, the opinion of speculative men is, that the two optic axes, concurring at the object, do there make an angle, by means of which, according as it is greater or lesser, the object is perceived to be nearer or further off.

§ 5.

418. Betwixt which, and the foregoing method of estimating distance, there is this remarkable difference, that whereas there was no apparent necessary connexion between small distance and a large and strong appearance, or between great distance and a little and faint appearance, there appears a very necessary connexion between an obtuse angle and near distance, and an acute angle and further distance; it does not in the least depend on experience, but may be evidently known by any one before he had experienced it, that the nearer the concurrence of the optic axes, the greater the angle,

angle, and the remoter their concurrence is, the lesser will be the angle comprehended between them.

§ 6.

419. There is another way mentioned by optic writers, whereby they will have us judge of those distances in respect to which the breadth of the pupil hath any sensible bigness, and that is the greater or lesser divergency of the rays, which issuing from the visible point do fall on the pupil; that point being judged nearest, which is seen by most diverging rays, and that remoter which is seen by less diverging rays; and so on, the apparent distance still increasing as the divergency decreases, till at length it becomes infinite, when the rays that fall on the pupil are to sense parallel. And in this manner it is said we perceive distance when we look only with one eye.

§ 7.

420. In this case also, it is plain we are not beholden to experience, it being a certain necessary

necessary truth, the nearer the direct rays falling on the eye approach to a parallelism, the further off is the point of intersection, or visible point from which they flow.

§ 8 and 9.

421. Now, though the accounts, here given, are received for true, yet they seem unsatisfactory: it is evident that when the mind perceives any thing, not immediately, and of itself, it must be by the means of some other perception: thus, for instance, the passions which are in the mind of another, are of themselves to me invincible; I may nevertheless perceive them by sight, though not immediately, yet by means of the colours they produce in the countenance. We often see shame or fear in the looks of a man, by perceiving the changes in his countenance to red or pale.

§ 10.

422. Moreover it is evident, that nothing which is not itself perceived can be the means

of perceiving any other thing: if I do not perceive the redness or paleness of a man's face, it is impossible I should perceive, by them, the passions which are in his mind.

§ 11.

423. Now it is plain that distance, being in its own nature imperceptible, and yet it is perceived by sight; it remains, therefore, that it be brought into view by some other perception, that is itself immediately perceived in act of vision.

§ 12.

424. But those lines and angles, by means whereof some men pretend to explain the perception of distance, are themselves not at all perceived; nor are they, in truth, ever thought of by those unskilled in optics. I appeal to any one's experience, whether, upon sight of an object, he computes its distance, by the bigness of the angle made by the meeting of the two optic axes? or whether he ever thinks of the greater or lesser divergency of
of

of the rays which arrive from any point to his pupil? In vain shall any man tell me, that I perceive certain lines and angles which introduce into my mind the various judgments of distance, so long as I myself am conscious of no such thing.

§ 16.

425. Now it being already shewn, that distance is suggested to the mind by the mediation of something else, which is itself perceived in the act of vision, it remains that we inquire what sensations there be that attend vision, unto which we may suppose the judgments of distance are annexed, and by which they are introduced into the mind. And, *first*, it is certainly experience, that when we look at a near object with both eyes, according as it approaches or recedes from us. we alter the disposition of our eyes, by lessening or widening the interval between the pupils; this disposition or turn of the eyes is attended with a sensation which seems to be that which, in this case, brings the judgment of greater or lesser distance into the mind,

§ 17.

426. Not that there is any natural or necessary connexion between the sensation we perceive by the turn of the eyes, and the greater or lesser distance ; but because the mind has, by constant experience, found the different sensations, corresponding to the different dispositions of the eyes, to be attended, each, with a different degree of distance in the object, there has grown an habitual or customary connexion between them ; so that the mind no sooner perceives the sensation arising from the different turn it gives the eyes, in order to bring the pupils nearer or further asunder, but it withal infers the different distance which was wont to be connected with that sensation : just as upon hearing a certain sound, the signification is immediately suggested to the understanding, which custom hath united with it.

§ 19.

427. I know it is a received opinion, that by altering the disposition of the eyes, the mind perceives whether the angle of the optic axes, or the lateral angles comprehended between the interval of the eyes and the optic axes, are made greater or lesser; and that, accordingly, by a kind of natural geometry, it judges the point of their intersection to be nearer or further off: but, that this is not true, I am convinced by my own experience, since I am not conscious that I make any such use of the perception I have by the turn of my eyes; and for me to make those judgments, and draw those conclusions, without knowing that I do so, seems altogether incomprehensible.

§ 20.

428. From all which it follows, that the judgment we make of the distance of an object seen with both the eyes, is entirely the result of experience: if we had not constantly

found certain sensations arising from the various disposition of the eyes, attended with certain degrees of distance, we should never make those sudden judgments from them, concerning the distance of objects, no more than we would pretend to judge of a man's thoughts by his pronouncing words we had never heard before.

§ 25.

429. That one perception may suggest another to the mind, it will suffice that they have been observed to go together, without any demonstration of the *necessity* of their co-existence, or without so much as knowing what it is, that makes them so to co-exist: of this there are innumerable instances, of which no one can be ignorant.

§ 28.

430. I have here set down those sensations, that seem to be the constant and general occasions of introducing into the mind the different judgments of near distance; it is true,
in

in most cases, that divers other circumstances contribute to frame our judgment of distance; to wit, the particular number, size, kind, &c. of the thing seen: concerning which, and all the other forementioned occasions, which suggest distance, I shall only observe, they have none of them, in their own nature, any relation or connexion with it; nor is it possible they should ever signify the various degrees thereof, otherwise than as, by experience, they have been found to be connected with them.

§ 38.

431. There may be good use made of lines and angles in optics; not that the mind judgeth of distance immediately by them, but because it judgeth by somewhat which is connected with them, and to the determination of which they may be subservient.

§ 41.

432. Hence it is a manifest consequence, that a man born blind, being made to see, would at first have no knowledge of distance by sight; the sun and stars, the remotest objects as well as the nearer, would all seem to be in his eye, or rather in his mind; the objects intromitted by sight, would seem to him, as in truth they are, no other than a new set of thoughts or sensations, each of which is as near to him as the perceptions of pain or pleasure: for our judging objects perceived by sight to be at any distance, is entirely the effect of experience, which one in those circumstances could not yet have attained to.*

* This has been fully confirmed by Dr. Cheselden, nineteen years after Berkeley's prediction, for, having couched a youth born blind, he relates, that when first he obtained his sight, he was so far from making any judgment about distances, that he thought all objects whatever touched his eyes, as what he felt did his skin. 7 Phil. Trans. Abr. p. 491. 492. See above, the note on N^o. 414.

§ 43.

433. And perhaps, on a strict examination, we shall not find, that even those who, from their birth, have grown up in a continued habit of seeing, are irrecoverably prejudiced on the other side; to wit, in thinking what they see to be at a distance from them; for at this time it seems agreed on all hands, by those who have had any thoughts of that matter, that colours, which are the proper and immediate object of sight, are not without the mind: but then it will be said, by sight we have also the perception of extension, and figure, and motion, all which may well be thought without, and at some distance from the mind, though colours should not. In answer to this, I appeal to any man's experience, whether the visible extension of any object doth not appear as near to him as the colour of that object; nay, whether they do not both seem to be in the very same place: is not the extension we see coloured, and is it possible for us, so much as in thought, to separate and abstract colour from extension? now
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where the extension is, there surely is the figure, and there the motion too. I speak of those which are perceived by sight.

§ 44.

434. But for a fuller explanation of this point, and to shew that the immediate objects of sight are not even the resemblances of things placed at a distance, it is requisite that we look nearer into the matter, and carefully observe what is meant when one says, that which he sees is at a distance from him. Suppose, for instance, that looking at the moon I should say it were 50 or 60 semidiameters of the earth from me, let us see what moon this is spoken of; it is plain it cannot be exactly that which is visible, or any thing like it, for that which I see is only a round luminous plain of about 30 visible points in diameter; and, in case I am carried from the place where I stand, directly towards the moon, it is manifest its appearance varies still as I go along, and, by the time I have advanced 50 or 60 semidiameters of the earth, I shall be so far from being near a little round
luminous

luminous flat, that I shall perceive nothing like it, this object having long since disappeared. Again, suppose I perceive, by sight, the faint and obscure vision of something, which I doubt whether it be a man or a tree, or a tower, but judge it to be at the distance of about a mile, it is plain I cannot mean, that exactly what I see is a mile off, or that it is the image or likeness of any thing which is a mile off, since, every step I take towards it, the appearance alters, and from being obscure, small, and faint, grows clear, large, and vigorous; and when I come to the mile's end, that which I saw first is quite lost, neither do I find any thing like it.

§ 45.

435. In these and the like instances, the truth of the matter stands thus: having of a long time experienced certain sensations, perceivable by touch, as distance, tangible figure, and solidity, to have been connected with certain sensations of sight, I do, on perceiving these last, forthwith conclude what tangible sensations are, by the usual course of nature,

ture,

ture, likely to follow; looking at an object, I perceive a certain visible figure and colour, with some degree of faintness, and other circumstances, which, from what I formerly observed, determine me to think, that if I advance forwards so many paces, or miles, I shall be affected with such or such sensations of touch: so that, in truth and strictness of speech, I neither see distance itself, nor any thing I take to be at a distance. I say, neither distance, nor things placed at a distance, are themselves perceived by sight: and I believe, whoever will look narrowly into his own thoughts, and examine what he means, by saying he sees this or that thing at a distance, will agree with me, that what he sees, only suggests to his understanding, that after having passed a certain distance, to be measured by the motion of his body, which is perceivable by touch, he shall come to perceive such and such tangible sensations, which have been usually connected with such and such visible sensations; but that one may be deceived by these suggestions, and that there is no necessary connexion between visible and

tangible

tangible sensations suggested by them, we need go no further to prove, than to the next looking-glass or picture.

§ 46.

436. From what we have shewn, it is a manifest consequence, that the notions of *space, outness*, and things placed at a distance, are not, strictly speaking, the objects of sight; they are not otherwise perceived by the eye, than by the ear: sitting in my study, I hear a coach drive along the street; I look through the casement and see it; I walk out and enter into it; common speech would incline me to think, I heard, saw, and touched the same thing, to wit, the coach: it is nevertheless certain, the sensations intromited by each sense are widely different and distinct from each other; but having been observed constantly to go together, they are spoken of as one and the same thing: by the variation of the noise, I perceive the different distances of the coach, and know that it approaches, before I look out; thus, by the ear I perceive distance, just after the same manner as I do by the eye.

§ 47.

§ 47.

437. I do not nevertheless say, I hear distance, in like manner as I say that I see it, the sensations of hearing not being so apt to be confounded with the sensations of touch as those of sight are ; so likewise a man is easily convinced, that bodies are not properly the objects of hearing, but only sounds, by the mediation whereof the perception of this or that body is suggested to his thoughts ; but then one is with more difficulty brought to discern the difference there is between the sensations of sight and touch ; though it be certain a man no more sees and feels the same thing, than he hears and feels the same thing.

§ 48.

438. One reason of which seems to be this ; it is thought a great absurdity to imagine, that one and the same thing should have any more than one extension and one figure ; but the extension and figure of a body being let into the mind two ways, and that indifferently

ferently either by sight or touch, it seems to follow, that we see the same extension and the same figure which we feel.

§ 49.

439. But if we take a close and accurate view of things, it must be acknowledged, that we never see and feel the same object; that which is seen is one thing, and that which is felt is another. If the visible figure and extension is not the same with the tangible figure and extension, we are not to infer that one and the same thing has divers extensions; the true consequence is, that the objects of sight and touch are two distinct things. It may perhaps require some thought, rightly to conceive the distinction; and the difficulty seems not a little increased, because the combination of visible sensations hath constantly the same name as the combination of tangible sensations wherewith it is connected, which doth of necessity arise from the use and end of language.

§ 50.

440. In order therefore to treat accurately and unconfusedly of vision, we must bear in mind, that there are two sorts of objects apprehended by the eye; the one primarily and immediately, the other secondarily and by the intervention of the former. Those of the first sort neither are nor appear to be without the mind, or at any distance off; they may indeed grow greater or smaller, more confused or more clear, or more faint, but they do not, cannot, approach or recede from us; whereas we say an object is at a distance, whenever we say it draws near or goes further off; we must always mean it of the latter sort, which properly belong to the touch, and are not so truly perceived as suggested by the eye, as thoughts by the ear.

§ 51.

441. No sooner do we hear the words of a familiar language pronounced in our ears,
but.

but the ideas corresponding thereto are suggested in the very same instant the sound and the meaning enter the understanding: so closely are they united, that it is not in our power to keep out the one, except we exclude the other also; we even act in all respects as if we heard the very thoughts themselves. So likewise the secondary objects, or those which are only suggested by sight, do often more strongly affect us, and are more regarded than the proper objects of that sense: hence it is we find it so difficult to discriminate between the immediate and mediate objects of sight.

§ 52.

OF THE MAGNITUDE OF OBJECTS PERCEPTIBLE BY SIGHT.

442. It is the opinion of some, that we perceive it by angles, or by angles in conjunction with distance: but neither angles nor distance being perceivable by sight, and the things we see being, in truth, at no distance from us, it follows that, as we have shewn lines and angles not to be the medium

the mind makes use of, in apprehending the apparent place of objects, so neither are they the medium whereby it apprehends their apparent magnitude.

§ 53.

443. It is well known, that the same extension at a near distance shall subtend a greater angle, and at a further distance a lesser angle; and by this principle we are told the mind estimates the magnitude of an object, comparing the angle with which it is seen, with its distance. What inclines men to this mistake (besides the humour of making one see by geometry) is, that the same perceptions which suggest distance, do also suggest tangible magnitude; but if we examine it, we shall find they suggest the latter as immediately as the former: I say, they do not first suggest distance, and then leave it to the judgment to use that as a medium, whereby to collect the tangible magnitude, but they have as close and immediate a connexion with the magnitude as with the distance, and suggest

gest it as independently of distance, as they do distance independently of magnitude.

§ 54.

444. It hath been shewn there are two sorts of objects apprehended by sight, each whereof hath its distinct magnitude or extension; the one properly *tangible*, i. e. to be perceived and measured by touch, and not immediately falling under the sense of seeing; the other properly and immediately visible, by mediation of which the former is brought in view.* Each of these magnitudes are greater or lesser, according as they contain in them more or fewer points, they being made up of points, or *minimums*; for, whatever may be said of extension, in the abstract, it is certain, sensible extension is not infinitely divisible. There is a *minimum tangible* and a *minimum visible*, beyond which sense cannot perceive. This every one's experience will inform him.

* That magnitude is perceived immediately by sight, is evident from Cheselden's Experiment; for the boy who obtained the power of seeing thought the things he saw extremely large. Yet, quere.

§ 55.

445. The magnitude of the object, which is barely suggested and is at a distance, continues always invariably the same; but the visible object, still changing as you approach to, or recede from the tangible object, it hath no fixed and determinate greatness; whenever, therefore, we speak of the magnitude of any thing, for instance, a tree or a house, we must mean the tangible magnitude, otherwise there can be nothing steady and free from ambiguity spoken of it; but though the tangible and visible magnitudes, in truth, belong to two distinct objects, I shall, nevertheless, (especially since those objects are called by the same name, and are observed to co-exist) to avoid tediousness and singularity of speech, sometimes speak of them as belonging to one and the same thing.

§ 56.

446. Now in order to discover by what means the magnitude of tangible objects is perceived

perceived by sight, I need only reflect on what passes in my own mind, and observe what those things be which introduce the judgment of greater or lesser into my thoughts, when I look on any object; and these I find to be, first, the magnitude or extension of the visible object, which being immediately received by sight, is connected with that other which is tangible and placed at a distance; secondly, the confusion or distinctness; and, thirdly, the vigorousness or faintness of the aforesaid visible appearance; *ceteris paribus*, by how much the greater or lesser the visible object, by so much the greater or lesser do I conclude the tangible object to be; but be the visible ever so large, yet, if it be withal confused, I judge the magnitude of the thing to be but small; if it be distinct and clear, I judge it greater.

§ 57.

447. Moreover the judgment we make of magnitude, do, in like manner as those of distance, depend on the disposition of the eye; also on the figure, number, and situation, of objects,

objects, and other circumstances that have been observed to attend small tangible magnitudes; thus, for instance, the very same quantity of visible extension, which in the figure of a tower, doth suggest the judgment of great magnitude, shall in the figure of a man suggest the judgment of a much smaller magnitude: that this is owing to the experience we have of the usual bigness of a tower and a man, no one I suppose need be told.

§ 60.

448. A man placed at ten feet distance, is thought as great as if he were placed at the distance of only five feet; which is true, not with relation to the visible, but tangible greatness of the object, the visible magnitude being far greater at one station than it is at the other.

§ 61.

449. Inches, feet, &c. are settled stated lengths, whereby we measure objects and estimate their magnitude; now that, these
cannot

cannot be mere visible inches, &c. is evident, because a visible inch is itself no constant determinate magnitude, and cannot therefore serve to mark out and determine the magnitude of any other thing; and to say this or that number of inches, shall imply no more than it is extended, without bringing any particular judgment into the mind. Further, an inch and a foot, from different distances, shall both exhibit the same visible magnitude, and yet at the same time you shall say, that one seems several times greater than the other. From all which it is manifest, that the judgments we make of the magnitudes of objects by sight, are altogether in reference to their tangible extension, and not the visible extension, which, though immediately perceived, is little noticed.

§ 85.

450. When we look through a microscope, we neither see more visible points, nor are the collateral points more distinct, than when we look with the naked eye at objects placed at a due distance: it brings us, as it were, into a new world; it presents us with a new scene

of visible objects, quite different from what we behold with the naked eye ; but, whereas the objects perceived by the eye alone, have a certain connexion with tangible objects, whereby we are taught to foresee what will ensue on the approach or application of distant objects to the parts of our own bodies, which conduce to their preservation, there is not the like connexion betwixt things tangible and those visible objects that are perceived by the help of a fine microscope. When I look through a microscope, my aim is to know what sensations are connected with each other : the more a man knows of the connexion of these, the more he is said to know of nature. (Third Dialogue of Hylas and Philonous).

Of Situation.

§ 93.

451. It is certain, that a man actually blind, and who had continued so from his birth, would, by the sense of feeling, obtain the knowledge of upper and lower ; by the motion of his hand, he might discern the situation of any tangible object placed within
his

his reach. That part on which he felt himself supported, or towards which he perceived his body to gravitate, he would term *lower*, and the contrary to this, *upper*, and accordingly denominate whatever objects he touched.

§ 94.

452. But, then, whatever judgments he makes concerning the situation of objects, are confined to those only that are perceivable by touch; all those things that are intangible, as his thoughts, desires, or passions, and in general all the modifications of his soul, to these he would never apply the terms upper and lower, except only in a metaphorical sense.

§ 95.

453. Whence it plainly follows, that such a one, if made to see, would not, at first sight think that any thing he saw was high or low, as shewn § 41. The proper objects of vision make a new set of perceptions perfectly distinct and different, and which can in no sort be perceived by touch; there is nothing to induce him to think those terms applicable to them;

them ; nor would he ever think it until he observed their connexion with tangible objects.

§ 99.

454. When he has, by experience, learned the connexion there is between the several sensations by sight and touch, he will be able, by the perception he has of the situation of visible things, in respect of one another, to make a sudden and true estimate of the situation of tangible things corresponding to them ; and thus perceive, by sight, the situation of objects which do not properly fall under that sense.

Of Figure.

§ 105.

455. As the visible magnitude hath no connexion with the tangible, it is plain the visible figure hath no necessary connexion with the tangible figure, so as at first sight to introduce it into the mind : for figure is the termination of magnitude.

§ 106.

456. Hence we may clearly deduce, that
in

in the first act of vision, no perception entering by the eye would have a perceivable connexion with the sensations to which the names *man*, *head*, *foot*, were annexed in the understanding of a man blind from his birth, so as to make themselves be called by the same names, and reputed the same things with them, as afterwards they come to be.

§ 107.

457. There remains, however, one difficulty which may seem to press hard upon our opinion; for though it be granted, that neither the colour, size, nor figure of the visible feet, have any necessary connexion with the sensations that compose the tangible feet; yet it remains undeniable, that the number of the visible feet being the same as that of the tangible feet, I may, without any experience, reasonably conclude, that they represent, or are connected with, the feet, rather than with the head. It seems that the sight of two visible feet will sooner suggest to the mind the idea of two tangible feet, than of one head; so that the blind man, upon the first reception of the visive faculty, might know which were
the

the feet, or number *two*, and which the head, or number *one*.

§ 108.

458. To get clear of this seeming difficulty, we need only observe, that diversity of visible objects doth not necessarily infer diversity of tangible objects, corresponding with them. A picture painted with a great variety of colours, affects the touch in one uniform manner; it is therefore evident, that I do not necessarily judge of the number of things tangible from the number of things visible; how therefore can I, before experience teaches me, that the visible legs, because two, are connected with the tangible legs; or that the visible head, because *one*, is connected with the tangible head? The things I see, are so very different and heterogeneous from the things I feel, that the perception of the one would never have suggested the other to my thoughts until I had experienced their connexion.

§ 124

459. It is commonly said, that the object
of

of geometry is abstract extension; but geometry contemplates figures: now figure is the termination of magnitude, but extension, in the abstract, hath no finite magnitude, whence it clearly follows it can have no figure, and consequently is not the object of geometry. And though it is commonly held, that all general truths are concerning universal abstract ideas, without which, we are told, there could be no science, no demonstration of any general proposition in geometry, it were no hard matter, were it now necessary, to shew that propositions and demonstrations in geometry might be universal, though they who make them, never think of abstract general ideas of triangles or circles.*

§ 128.

460. When, on perceiving any thing, I range it under this or that sort of perception, it is because it is perceived after the same manner, or because it has a likeness or conformity with, or affects me in the same way as, perceptions of the sort I rank it under.

* See Chap. 3.

In short, it must not be entirely new, but have something in it old and already perceived by me : it must, I say, have so much, at least, in common with the perceptions I have before known and named, as to make me give it the same name with them : but it has been, if I mistake not, clearly made out, that a man born blind, would not, at first reception of his sight, think the things he saw were of the same nature with the objects of touch, or had any thing in common with them, but that they were a new set of sensations, perceived in a new manner, and entirely different from all he had ever perceived before : so that he would not call them by the same name, nor repute them to be of the same sort, with any thing he had hitherto known. Note, this was fully confirmed by Chcfielden's experiment ; for, the boy, on being made to see, could not distinguish a cat from a dog, nor know by sight the cat, he before knew by the touch.

§ 130.

461. It is a prevailing opinion, even among those who have thought and written most accurately concerning our ideas, that some-
thing

thing more is perceived by sight, than barely light and colours, with their variations. Mr. Locke terms sight the most comprehensive of all our senses, conveying to our minds the ideas of light and colours, which are peculiar only to that sense; and also the far different ideas of space, figure, and motion, B. 2. chap. 9. § 9. Space, or distance, we have shewn, is not otherwise the object of sight, than of hearing; Vid. § 46. And as for figure and extension, I leave it to any one, that shall calmly attend to his own clear and distinct ideas, to decide whether he has any perception intromitted immediately and properly by sight, save only light and colours; but by the mediation of these, far different ideas are suggested; but so they are by hearing, which besides sounds, doth by their mediation suggest not only space, figure, and motion, but also all other ideas, whatsoever, that can be signified by words.

§ 132.

462 A further confirmation may be drawn from the solution of Mr. Molineaux's Problem, published by Mr. Locke, in his Essay: "suppose
a man

a man born blind, and now adult, and taught by his touch to distinguish between a cube and a sphere of the same metal, and nearly of the same bigness, so as to tell when he felt one and the other which is the cube and which the sphere, and suppose both placed on a table, and the blind man made to see; quære, whether by his sight, without touching them, he could now distinguish and tell which is the globe and which the cube? To which the proposer answers, *not*; for, though he has had experience how the globe and how the cube affects his touch, yet he has not yet attained the experience, that what affects his touch so or so, must affect his sight so or so: or that a protuberant angle in the cube, that pressed his hand unequally, shall appear to his eye as it doth in the cube." I agree with my friend, in his answer to this problem, and am of opinion, that the blind man, at first sight, would not be able with certainty to say, which was the globe, which the cube, whilst he only saw them. Locke, B. 2. chap. 9. sec. 8.*

* See this question well treated in the Memoirs of Berlin, for 1770, and the following years.

§ 133.

463. Now if a square surface perceived by touch, be of the same sort with a square surface perceived by sight, it is certain the blind man here mentioned might know a square surface as soon as he saw it: since therefore he is supposed to have known by his touch, that a cube is a body terminated by square surfaces, and that a sphere is not, upon the supposition that a visible and a tangible square differ only *in numero*, it follows that he might know, by the unerring mark of the square surfaces, which was the cube and which not, while he only saw them; else the solution given by these two thoughtful and ingenious men is wrong.

Of visible Motion.

464. That visible motion is not of the same sort as tangible motion, seems to need no further proof, it being an evident corollary, from what we have shewn, concerning the difference

between visible and tangible extension; but, for a more express proof hereof, we need only observe, that one who had not yet experienced vision, would not at first sight know motion; whence it follows, that motion perceivable by sight, is of a sort distinct from motion perceivable by touch; which I prove thus; by touch he could not perceive any motion but what was up or down, to the right or left, nearer or further from him. Besides these and their several complications, it is impossible he should have any idea of motion; he would not therefore think any thing to be motion, or give the name *motion* to any perception, which he could not range under some or other of those particular kinds thereof: but, from sec. 95, it is plain, by the mere act of vision, he could not know motion upwards or downwards, to the right or left, or in any other possible direction; therefore he would not know motion at all at first sight.

§ 139.

465. It may be asked, how visible extension and figures come to be called by the same name

name with tangible extension and figures, in all ages and nations, if they are not of the same kind?

§ 140.

466. To which I answer, we can no more argue a visible and tangible square to be of the same species, from their being called by the same name, than we can, that a tangible square, and the monosyllable consisting of six letters whereby it is marked, are of the same species, because they are both called by the same name. It is customary to call written words and the things they signify by the same name; for words not being regarded for their own sake, or otherwise than as they are marks of things, it were superfluous, and beside the design of language, to have given them names distinct from those of the things marked by them: the same reason holds here also. Visible figures are the marks of tangible figures; in themselves they are little regarded, or upon any other score than for their connexion with tangible figures, which by nature they are ordained to signify; we regard the objects that

environ us, in proportion as they are adapted to benefit or injure our own bodies, and thereby produce in our minds the sensations of pleasure or pain ; now bodies operating on our organs by an immediate application, and the hurt or advantage arising therefrom depending altogether on the tangible and not on the visible qualities of any object, this is a plain reason why those should be regarded by us, much more than these : and for this end the visive faculty seems to have been bestowed on animals, that by the perception of visual sensations they may be able to foresee, from the experience they have had, what tangible sensations are connected with such or such visual sensations. And because this language doth not vary in different ages or nations, hence it is, that in all times and places, visible figures are called by the same names as the respective tangible figures suggested by them, and not because they are alike, or of the same sort with them.

§ 141.

467. But, say you, a tangible square is liker to a visible square than to a visible circle ; it has four angles and as many sides ; so also has a visible square ; but the visible circle has no such thing, being bounded by one uniform curve, without right lines or angles, which makes it unfit to represent the tangible square ; from whence it seems to follow, that visible figures are patterns of, or of the same species as the respective tangible figures represented by them ; that they are like to them, and of their own nature fitted to represent them, and in no respect arbitrary, as words are.

§ 142.

468. I answer, it must be acknowledged, the visible square is fitter than the visible circle to represent the tangible square : but it is not because it is liker, or more of a species with it, but because it contains in it several distinct parts, whereby to mark the several distinct corresponding parts of a tangible square.

The square perceived by the touch, hath four distinct equal sides and four distinct equal angles ; it is therefore necessary, that the visible figure which shall be most proper to mark it, contain four distinct equal parts, whereby to denote the four equal angles of the tangible square, and four distinct equal parts corresponding to the four sides of the tangible square.

§ 143.

469. But it will not hence follow, that any visible figure is like unto, that is, of the same species with its corresponding tangible figure, unless it be shewn, that not only the *number* but the *kind* of parts, be the same in both, no more than that a wooden and a metallic square are of the same species. To illustrate this, I observe, that visible figures represent tangible figures, much after the same manner that written words do sounds. Now in this respect, words are not arbitrary, it not being indifferent what written word stands for any sound, for it is requisite that each word contain in it so many distinct characters as there
are

are variations in the sounds it stands for ; thus the single letter *a* is proper to mark one simple uniform sound, and the word *adultery* is accommodated to represent the sound annexed to it : in the formation thereof, there being eight different collisions or modifications of the air by the organs of speech, each of which produces a difference of sound, it was fit the word representing it should consist of as many distinct characters, thereby to mark each particular difference or part of the whole sound ; and yet nobody, I presume, will say, the single letter *a*, or the word *adultery*, are like unto, or of the same species with the respective sounds by them represented.

§ 144.

470. It must be confessed, that we are not so apt to confound other signs with the things signified, or to think them of the same species, as we are visible and tangible sensations ; but a little consideration will shew us how this may be, without our supposing them of a like nature. These signs are constant and universal; their connexion with tangible sensations has been learnt from our first entrance into the world,

world, and ever since, almost every moment of our lives, it has been occurring to our thoughts, and striking deeper into our minds : when we observe that signs are variable, and of human institution ; when we remember there was a time they were not connected in our minds with those things they now so readily suggest, but their signification learned by the slow steps of experience ; this preserves us from confounding them. But when we find the same signs suggest the same things all over the world ; when we know they are not of human institution, and cannot remember that we ever learned their signification, but think that at first sight they would have suggested to us the same things they do now ; all this persuades us they are of the same species as the things respectively represented by them, and that it is by a natural resemblance they suggest them to our minds, independently of experience,

§ 471

471. Upon the whole, I think we may fairly conclude, that the proper objects of vision constitute an universal language of the
 Author

Author of nature, whereby we are instructed how to regulate our actions, in order to attain those things which are necessary for the preservation and well-being of our bodies, as also to avoid whatever may be hurtful and destructive of them.

SECT. V.

OF TACTILE SENSATIONS, OR WHICH APPERTAIN TO
THE SENSE OF TOUCH.

472. Of all sensations, the most important to us are the tactile, which we receive by the organs of touch dispersed all over our bodies: such is the general sensation of resistance, which comprehends hardness or solidity, softness or fluidity, roughness, smoothness, sharpness, bluntness, heat, cold, and motion; and the continuation of any of them, which is called extension; also their various degrees; to which we may add various sensations, whether afflictive or pleasurable, manifest and distinct, or obscure and undefined; such as various pains, aches, lassitude or rest, refreshment, exercise, drowsiness, &c.

473. *Note*, the abstract terms here employed,

ployed, do not denote any abstract qualities, but are used merely as abbreviations.

474. The various sensations of *resistance* are those, which we in general call *bodies*,* whether the resistance be made by them, as that made by the grosser bodies; or that made to the most subtle, as light and electricity. They are impressed on our minds by the author of nature, according to certain constant laws, connected with each other, and varied in various circumstances, but uniform in the same: these assure us of the reality of things, and distinguish them from dreams and fictions of imagination. Hence also those bodies which present the least resistance, were by many deemed of a spiritual nature.

475. The order, regularity, and consistency, of sensations of any kind, discovered by experience, form what is called the usual *course of*

* Dr. Berkeley having improperly called these sensations *ideas*, unfortunately gave occasion to his opponents to confound them with ideas of imagination, or mere fictions, though he expressly called them *ideas of sense*, and declared he called them *ideas*, only because, like ideas of imagination, they exist only in the mind. Principles, sec. 33, 38, 90, 91, 95; and in his Third Dialogue. This Dr. Reid has the candour to acknowledge.

nature,

nature, being grounded on laws independent of the will of man, and hence called the *laws of nature*.

476. The *names* of bodies comprehend all the sensations, whether of colour, smell, taste, figure, that accompany them, or belong to them; and all their physical properties, as flexibility, elasticity, electricity; and also the various phenomena they exhibit, in chymical experiments. Besides these properties nothing else can be found in them; when separately considered, they are often called the qualities or properties of the aggregate on which a name is bestowed. Thus a *rose* denotes a vegetable of a red or white colour, of a peculiar smell, taste, and figure; which colours, and smell, and figure, are called its *qualities*, or properties. So *gold* is a name given to the sensation of a peculiar hardness, weight, extensibility, and fusibility, accompanied with a shining yellow colour, and exhibiting various phenomena, when chymically examined.

477. The sensation of resistance, when considerable, constitutes what is called *hardness*, or a hard body; as the sensation of sweetness constitutes what is called *sweetness*, or a sweet
body.

body. When the resistance is less considerable, so as to yield without pain to a slight impression, the body is denominated *soft*. When still less considerable, it constitutes a *liquid*. And when its resistance, while at rest and unconfined, is scarcely perceptible, and it is also invulnerable for the most part, it is called a *fluid*. All these modifications of resistance are susceptible of various degrees; even electron, caloric, and light, meet with some.

478. *To feel* is to receive a sensation by the touch, as to *hear* is to receive a sound by the ear, and to *see* is to perceive a colour or light; to *taste* or *smell*, is to receive one or other of their different species respectively; the only difference is, that we learn by experience to connect colours, sound, tastes, and smells, with certain tangible sensations, and their association or union we call *things*; thus we say, a *coloured thing*, an audible thing, a sweet things, &c.; but a tactile sensation being referable to no other save the above, and not always to any of them, for instance in the dark, or those of the blind, is simply called a *thing* or *reality*; more especially as it is to us of the greatest importance: even bodily pain is called
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 a thing.

a thing ; so we say the gout is a painful thing. It is plain that, in all these cases, the word *thing* denotes nothing more than a sensation, or a group of sensations: nay this word has been applied, though figuratively, even to ideas of imagination, as in the second Psalm, “ why did the people *imagine a vain thing*.”

479. Hence to feel hardness, softness, &c. is tantamount to feeling a hard or soft thing, these being the objects of those perceptions, or what is felt, and nothing else.

480. The sensation of resistance, or what is the same thing, a *body*, frequently contains numerous parts ; and besides the resistance that each of them offers, the whole of them resists separation from each other ; and from the greater or lesser difficulty, with which this separation is effected, the body is denominated *hard* or *soft*, &c. as already said, N° 477. Hence there are two species of resistance, or hardness ; one, that of each individual particle, or *minimum tangibile*, which is *absolute*, as it cannot be destroyed without annihilation of the body ; the other, that of the separation of the particles, which is entirely relative. When, as Mr. Locke observes, the difficulty is

is such, that it will put us to pain before we can make the body change its figure, the body is denominated *hard*; but if the change of figure can be effected without pain, the body is denominated *soft*. Hence Augustus King of Poland, or Marshal Saxe, who could with their hands bend a horse-shoe and crush a crown piece, would undoubtedly find many bodies soft, which we call hard; and a fly which can run upon water must find it hard, though to us it appears soft: these denominations therefore, in this case, are merely relative to our different sensations, and denote nothing absolute.

481. That there exists an adherence or cohesion of particles to each other, at the period of their separation, is not denied; but it does not exist before the difficulty of separation is experienced; for it is felt, and therefore is a sensation. Yet an eminent professor asks,* who would reason with a man who should affirm, that diamonds are not hard before they are handled? He is not aware that, by calling a stone a diamond, he already supposes it hard, hardness being included in the signification of

* Reid on the Human Mind, chap. 5. sec. 2. p. 103.

the word diamond, (see N^o 476.) A stone indeed may be presumed to afford the sensation of hardness when tried, as this is *suggested* by other external characters; but no jeweller will assure him of its actual existence, until he has experienced it; and then he judges it to have pre-existed, because he is certain he would have perceived the same difficulty at any former period, if he had subjected it to the same trial: this he infers from the immutability of the stone; so that in every case a reference is made to the peculiar sensation. The professor is therefore mistaken in saying, that hardness or softness are neither sensations, nor like any sensation; do not his own expressions, *firminess* or *ease* of change, allude to sensations? otherwise they would be unintelligible: his distinction of hardness, which is a sensation, and hardness, which is not a sensation, but a physical quality, is totally unfounded: indeed the consciousness of their identity seems to force itself upon him, for he allows that it is difficult to disjoin the sensation from what he calls the external quality of hardness, in whose shadow, he says, it is apt immediately to hide itself: this a philosopher,
he

he adds, must attain by pains and practice. This paragraph surely requires no further animadversion ; more especially as he owns, “ that no man can shew by any good argument, that all our sensations might not have been as they are, though no body or quality of body had ever existed.”*

482. *Solidity*, in natural philosophy, is justly defined, by Mr. Locke, to be the resistance which we find in one body, to the entrance of another body into the space it occupies, until it has left it: it is therefore a sensation, and its result being negative, is called *impenetrability*: in effect, penetration would imply the annihilation of the body penetrated, an effect which nature does not admit. Yet in some experiments, a partial penetration takes place in appearance, as in some metallic alloys, mixtures of sulphuric acid and water, or alcohol and water, from a closer approximation of the parts of both, than there previously existed of the parts of either.

483. *Solidity in geometry* denotes the quantity of space contained in a body, and thence

* P. 105, 107, 115.

called its solid or cubic contents, or volume. *Mass* denotes the quantity of particles (*minima tangibilia*) contained in a given volume.

484. *Heat* and *cold* are acknowledged to be sensations received by the sense of touch: yea they affect our whole frame more universally than any other sensations do; hence we say we are hot or cold, but we cannot say when we see a colour, that we are coloured; or when we perceive a sweet or bitter taste, that we are sweet or bitter; or when we feel extension, that we are extended, &c. These denominations are even bestowed on other tangible sensations (commonly called bodies) which are not properly their subject: thus a lighted coal is called *hot*, and ice is called *cold*, because on their approach, or contact with the organs of touch, those sensations are impressed upon us. In the same manner as certain tangible sensations are called coloured, when in their presence either actually felt or conceived, colours are perceived.

485. An eminent professor thinks, it were absurd to suppose that a thermometer could not rise or fall, unless some person were present; I should think it absurd to suppose that a ther-

mometer could even exist without being perceived by some mind, either human, angelic, or divine; it being nothing more than an aggregate of sensations, or perceptions, according to the difference of the minds that perceive it.

486. It appears to me, that the cause of the sensation of heat, and of the other effects attributable to it, is not itself a sensation of any kind, but a peculiar exertion of the divine agency, regulated by various laws, in various circumstances, though invariable in each. Its most general effect is an internal motion of the parts on which it operates, as cold is produced on the diminution of that motion. This exertion is now generally called *caloric*, which is only an expression of the nature of an algebraic sign, by which the cause is more commodiously expressed.

487. *Extension* consists in the continuation of the sensation of resistance in its various degrees, whether of hardness, liquidity, or fluidity; if, therefore, there be but one resisting particle, there can be no extension. In this definition I have the pleasure of agreeing with Mr. Locke: he tells us, that the extension of
body

body is nothing but the cohesion, or *continuity*, of solid, separable, moveable parts.*

488. A few may object, that some bodies are extended that yet offer no resistance, as calm air; but the very act of inspiration may undeceive them.

489. *Figure*. Mr. Locke justly defines to be the relation which the parts of the termination of an extended body have among themselves, and consequently of the termination of distinct though continued sensations.

490. *Place* is the situation of a body relatively to others apparently at rest, or moved with equal velocity in the same direction; thus a body may be said to be in the same, or in a different place, relatively to the bodies with which its situation is compared.

491. *Motion* is a change of place; or may more accurately be defined the successive persevering existence of a body, or of some of its parts, in different places. I say *persevering*, because if a body were annihilated in one place, and again created in another, it could not be said to have been moved.

* Book ii. chap. iv. sec. 5.

say, when one body strikes another, that *an unintelligible something strikes another unintelligible something*, opening a door to atheistical mystery, and the utter subversion of human reason.

502. *Gravity* denotes the tendency which bodies manifest, in certain circumstances, to moving to the earth, or to the earth's centre. If we support a heavy body, we feel a degree of pain or lassitude: this tendency then exists, since it produces that effect: we also perceive this motion accelerated, if the heavy body be unsupported; therefore, in all such cases, the Divine agency is exerted. But where it produces no effect whatsoever, as where a heavy body rests on another that is quiescent; for instance, a ton of lead on a solid rock; its tendency downwards cannot be supposed to exist; for to suppose a cause in action, and yet producing no effect, is an evident contradiction. Besides, the force of gravity cannot be distinguished from its *momentum*: now the *momentum* is the product of the mass multiplied into the celerity: where, therefore, there is no celerity, there can be no *momentum*, and consequently no force of gravitation.

503. *Universal attraction* denotes the tendency which the planets have, through the Divine agency, to approach to the sun and to each other, as *chynical* or *elective attraction* does that which bodies of different species have to others, in certain circumstances.

504. Tactile sensations are variously mixed and diversified: their different collections are marked by different names: thus one is called *flesh*, another *wood*, another *earth*, another *stone*, another *metal*, another *wool*, another *silk*, &c. &c.; and the same may be said of colours, tastes, and smells.

SECT. VI.

OF THE HUMAN BODY AND OBSCURE SENSATIONS.

505. There is a set of closely-connected tangible sensations, with some or other of which the human mind is constantly impressed, from the earliest origin of life until its final extinction, whose aggregate constitutes the human body.

506. From the peculiar disposition of these sensations, arises an organization, whose peculiarity

liarity and integrity is a necessary condition to the different sensations allotted to different parts of the aggregate, such as that of the eyes, ears, &c. the sensation of tact alone being distributed through the whole aggregate.

507. In addition to the peculiarities of organization, this aggregate differs from all other sensations in many particulars.

508. First, parts of it, such as the tongue, hands, legs, and feet, are subjected to the control of the will, and other parts are affected even involuntarily by the passions and imagination.

509. Secondly, these appropriate sensations are distinguished from adventitious sensations by a double reference to the sentient principle: whereas, the adventitious afford only a single reference thereto. Thus, if I touch one hand with the other, I have a perception of their contact, in each; but if I touch a stone with my hand, I have a sense of their contact, not in the stone, but in my hand.

510. They differ also in another circumstance, the adventitious sensations not being the seat of either pain or pleasure, whereas the appropriate are the proper seat of both:
thus

thus if I am scratched by a pin, though the pin is also a sensation, yet I do not feel nor attribute pain to the pin, but to the hand, or other part scratched. This circumstance has much embarrassed both the hylobists and materialists; both, in contradiction to the evidence of their senses, being obliged to assert, that the brain alone is the seat of sensation, to avoid the consequence that otherwise would inevitably follow from their respective sentiments, that the soul or sentient principle is extended, since one may at the same time feel in the head and in the toe.

511. Thirdly, these appropriate sensations are distinguished by their *situation* with respect to each other, some being relatively *external*, visible, and tangible by the hand, or other external parts; others *internal*, as the stomach, heart, brain, liver, spleen, bowels, and other *viscera*. The existence of the latter, is not clearly and distinctly noticed by the mind to which they are appropriated, for four reasons; first, because their existence is attested, neither by the sight, nor distinctly by a double reference by tact, as the external parts are; and, secondly, because the sensation of each is confounded
and

and blended with those of all the other *viscera*; which, mixed sensation, when all are in a sound state, is called the *sensation of health*, the pleasure of which is clearly perceived during recovery from a severe disorder. Of such mixed sensations the arts of perfumery, cookery, painting, dying, and optics, present many instances. Thirdly, the shape, extent, and motion of each, may have originally been perceived distinctly, though now obscurely, from familiarity and attention to livelier sensations, their consciousness is so far diminished, that it cannot be distinctly recollected; for recollection requires distinct attention, and attention requires dwelling on the perception for some perceptible portion of time; thus what we see or hear rapidly cannot be distinctly recollected: it is thus that, though the mind does not cease to think during profound sleep, yet its ideas are so feeble, and its consciousness so slight, that no trace of them remains on the memory. See 1 Baxter, 331.*

* Several curious instances of such evanescent consciousness are produced by professor Dugald Stewart, in his chapter on *Attention*.

Fourthly,

Fourthly, the automatic motions of the internal parts are carried on by Divine agency; their existence is therefore known to the Divine mind, and some of them may be obscurely known to us; for instance, the motion of the blood, which is suggested by that of the heart and pulsation. The whole organization of the human body, its nerves, muscles, tendons, fibres, brain, &c. consist of sensations, which now indeed, from long habit, are so obscurely perceived, and so transiently attended to, as not to be distinctly noticed, any more than the train of volitions necessary to the rapid execution of a piece of music, which are nevertheless perfectly unnoticed by the performer himself, who while playing often holds a conversation on other subjects. See post. N° 887 and 888. But at our birth, most probably, they are all distinctly perceived, and from their new interference with each other, most probably, the first pains and cries of infants proceed. But by custom, the pain gradually lessens, and at length ceases; and thus the perception ceases to be distinctly attended to; yet their intermediation is still a necessary step to the

the distinct perceptions presented to us by our senses, to our ideas, and to our thoughts of every kind ; for when they cease to exist, or are deranged, either by the manifest or hidden laws of our constitution, all sensual perceptions, and even life itself, is extinguished.

512. Many other changes also take place in the internal, and even in the external parts of our frame, which by being gradual, escape notice ; such as our growth and decay, and the rudiments of various disorders ; in consequence of laws which take place in various circumstances ; on the occurrence of certain emotions, ideas, or sensations, whether in the internal or external parts, in consequence of these, the organization may be injured or destroyed, as the organs of sight by excessive light, and the whole frame by certain cadaverous smells, &c. : but the most usual source of injury, and even of the destruction of life, from adventitious and extraneous sensations, arises from the violence of the sensations of heat, cold, percussion, and obstruction to necessary animal functions.

513. Some may perhaps object, that difference of situation is incompatible with an
existence

existence purely mental; thus judgments, volitions, or passions, have no situation to undeceive them it were perhaps sufficient that they should reflect on the difference of situation which their dreams often present to them, or a common mirror, or their ideas of common sensible objects; for instance of a house, wherein they may contemplate the different situation of the walls, windows, floors, stairs, rooms, roof, &c; and yet all these exist confessedly only in the mind, which thus ideally represents them in their absence.

CHAPTER II.

OF THE CAUSE OF OUR SENSATIONS

514. No solid or even plausible reason can be assigned for deeming our sensations to originate from any other cause than the known cause of our existence, the Supreme Being, and the impressions we receive from each other, or other animals, whose efficacy is evidently derived from him: as we have no power over our own, still less can we be supposed to have any over beings, with which we are not identified,

identified, but by concession from the common Author of our existence ; a power limited, not by our will, or at our discretion, but regulated and confined by laws of his appointment.

515. The supposition, that any other class of beings, whether known or unknown, possess a power of acting on our minds, is not only gratuitously assumed, where not attested by Divine revelation, rationally interpreted, but has served as a foundation for the superstructure of the grossest and most pernicious errors, which unhappily have, for forty centuries at least, overspread the greater part of the globe, and still spread their malignant influence over no inconsiderable portion of it, as polytheism, idolatry, magic, demonism, and the various cruel and abominable practices that sprung from them.

SECT. I.

OF MATTER.

516. We are now to treat of the most important object of contention that divides modern metaphysicians : the existence of a substance

stance called *matter*; which, strange to tell ! is deemed impossible by one party, on arguments acknowledged, even by the adverse party, to be unanswerable;* though it asserts at the same time, that the denial of its existence is absurd and fanatical.† And while some of its ablest patrons own the supposition of its existence to be barely superfluous and unnecessary ;‡ moreover its admission is well known to have been the source of the wildest systems of scepticism, atheism, Epicureanism, Spinozism, &c. ; and of the most absurd philosophical hypothesis, namely, its co-eternity with the Divinity, its infinite divisibility, its homogeneity and innate activity, &c.; yet, after having thus perplexed themselves, and caused inextricable confusion, its defenders gravely tell us, the subject is placed beyond the limits of the human understanding, (as if they were acquainted with them, and had fixed and defined them,) which is an express avowal, that they know nothing of matter.

517. But, to be more particular, I shall, in

* Reid on the Mind, p. 21.

† Stewart on the Mind, p. 6.

‡ Reid on the Mind, 107. Encyclop. Britt. *Metaph.* 544
the

the *first place*, state the definition of matter, given by its principal advocates, and examine its truth and consistency.

Secondly, the concessions they have been forced to make.

Thirdly, the origin of the prevailing belief of the existence of matter.

Fourthly, the advantages gained by the speculative rejection of matter.

Lastly, I shall answer the objections made, or that may be made, to the anti-hyloistic system.

SECT. II.

DEFINITION OF MATTER.

518. I omit the definitions given by the peripatetics, Cartesians, and Leibnitzians, as they are now generally abandoned.

519. Mr. Locke, in his reply to the bishop of Worcester,* defines matter to be a solid and extended substance. This definition involves an impossibility; for extension, ac-

* See the note to sec. 56, Book 4. chap. 3, 16th edition, vol. ii. p. 144,

According to the hyloists, consists of parts placed one beyond the other; now I ask, whether these parts are themselves extended or not? If not, then according to this definition they are not material; if they are extended, then the same question recurs without end, and thus nothing is explained; it is just as if the Indian mentioned by Mr. Locke to have said, that the world was supported by an elephant, and the elephant by a tortoise, should have added, that this tortoise was supported by another tortoise, and so on; or, as if an anatomist should say, that a fibre consists of fibres one outside the other. Accordingly, this definition is exploded by Mr. Locke himself;* and yet he gives no better; nay he affirms, that “this primary
 “and supposed obvious quality of bodies will
 “be found, when examined, as incomprehen-
 “sible as any thing belonging to our minds,
 “and a solid extended substance as hard to
 “be conceived, as a thinking immaterial one.”
 To such extremities the most ingenious men reduce themselves, when they outstrip the evidence of their senses! and undervalue that of consciousness. The difference however

* Lib. 2. chap. xiii. sec. xv. p. 133.

betwixt our knowledge of this fictitious extension, and the knowledge of our thoughts, is very different; the latter is founded on the evidence of consciousness, the former on delusions of imagination and reasoning acknowledged to be absurd.

520. Secondly, in this hypothesis, either there exist certain parts which are the primary elements of extension, or there are no such parts: if we suppose such parts, their magnitude must be determinate or indeterminate; if determinate, then they are material, though single, and consequently extension does not require parts beyond parts, or else they are further divisible, and consequently not primary. Indeterminate their magnitude cannot be; for, whatever exists is determinate. If there are no such elementary parts, then matter must be infinitely divisible, and if so, it consists of parts infinitely small; for division does not create the parts, they must exist before they can be divided; but these infinitely small parts are still material, and yet not extended, being already as much divided as they can be; therefore extension is not essential to matter.

521. Thirdly, Doctor Priestley, the parent

of most of our modern philosophic discoveries, though his notion of matter be as absurd and incomprehensible as any other, (for who that admits it can advance any thing rational concerning it?) produces a very conclusive argument against attributing solidity, or impenetrability to it, as properties essential to its existence; it runs thus, the power of attraction is necessary to solidity: for every body, as solid and impenetrable, must have some particular *form* or *shape*; but it is no less obvious, that no such *figured thing* can exist, unless the parts of which it consists have a mutual attraction, so as to keep close and united to each other: the power of attraction must therefore be essential to the existence of all matter, if solidity be essential to it, since no substance can retain any form without it, nor its parts adhere to each other. Now it is generally held, that matter is inert, and destitute of all power, unless the *vis inertiae*, if such there be, be deemed a power;* and Sir Isaac Newton expressly denies gravity to be a power inherent and essential to matter, and consequently attraction of cohesion; which is the same power acting at a smaller

* Which is denied by Dr. Franklin and others. See *Sequi Phy.* 91.

or no distance.* (See Newton's letter to Bentley, January 17th, 1692-3.)

522. Hence Mr. Locke, though he defines matter to be a solid and extended substance, yet he asserts,† that, if God has not conjoined its parts by connection inconceivable to us, we must deny the consistency and even the being of matter; since every particle of it having some bulk, has its parts connected by ways inconceivable to us.

523. We hereby see the necessity of admitting the only definition of extension, of which our senses afford us any knowledge, namely, that it is nothing more than a continuation of tactile perceptions, more or less coherent, as already said, N° 487; and this coherency is nothing but the Divine agency diversified in different bodies and in different circumstances. This agency we may call *attraction*, of which no better account can be given.

524. Doctor Reid also agrees with Locke, in stating that matter is something extended and solid, which may be measured and

* See Hutt: Mathem. Dict. *Attraction*, p. 171.

† Vol. ii. p. 148.

weighed, and is the immediate object of the touch and sight.* But,

525. If matter had been the immediate object of either sight or touch, it surely might have been better described than by calling it *something*; and particularly if it were the *immediate* object of both those senses. The *immediate* objects of our senses are those things which we immediately know by their means, and this knowledge is universally called a sensation: the immediate objects of sight are light and colours; those of touch, are hardness, softness, heat, cold, &c. These sensations, the Doctor owns, † have not the least similitude to external qualities; these cannot therefore be said to be immediately perceived by our senses: hence he further owns, that our senses barely *suggest* them and their belief, as if it were by a kind of natural magic.‡ Nay, he says, that their existence cannot be collected from our sensations, even by reasoning;§ how then can they be said to be immediately perceived by them? He probably meant no more

* 1. *Intellect. Powers*, p. 265.

† *On the Mind*, p. 107. 108. & *passim*.

‡ *Ibid.* p. 113. § *Ibid.* 115.

than that they are immediately suggested by them, and, as he thinks, by the constitution of our nature: yet, the constitution of our nature cannot be such as to suggest a falsehood, an absurdity, and much less an impossibility; though our ignorance, precipitate reasoning, prejudices, and language founded on prejudices, may.

526. *Mensurability* too evidently depends on extension, not to share its fate; and of this enough has been said, N° 519.

527. *Ponderability*, in the same manner, depends on the greater or lesser number of tangible sensations comprised in a given space, being nothing more than their tendency to the earth, N° 502. This is immediately perceived by the touch, and only suggested by the sight, from a long and early association grounded on experience, N° 502.

528. In the hyloistic hypothesis, man consists of an immaterial or spiritual soul, contained in a material organised body, and each of these is said to exercise an influence on the other. Now a spiritual being occupies no space, and therefore cannot be said to be any where in the hyloistic sense; and as to the influence which these two substances are said to

S 4

exercise

exercise on each other, it is perfectly inconceivable, as one is supposed to be extended and the other not; it is therefore said to be grounded on the established laws of their union; and yet these laws are acknowledged to be unnecessary, since it is said, that “no man can shew, by any good argument, that all our sensations may not have been as they are, though no body, or quality of body, had ever existed.”* The admission of matter is therefore contrary to the first of Sir Isaac Newton’s rules of philosophizing, that *we should admit no more causes of thing: than are sufficient to explain appearances.*

529. Extension and solidity being then perceived immediately by sense, and consequently mere sensations, cannot exist in an insentient subject, such as matter is said to be; and consequently matter, which is said to be both extended and solid, is something as impossible and repugnant as a square circle, or any other chimera. And hence Dr. Price, though a zealous maintainer of hyloism, was at last induced to own, in his controversy with Dr. Priestley, † that it would not perhaps be impossible to convince him, that there was no

* Reid on the Mind, 107.

† P. 85.

such thing as matter. Those eminent prelates, Sherlocke and Smalridge, embraced the antihyloistic system, as the late Mr. Day, and many more of my acquaintance have done ;* and Dr. Priestley tells us he knew some more.† And see post. N° 612. Chambers says, article Existence, that many in his time, that is, ann. 1730, or 1740, thought the Berkeleyan system demonstrated.

SECT. III.

CONCESSIONS OF THE ADVERSARIES OF ANTI-HYLOISM.

530. First, Mr. Locke divides all our sensations into primary and secondary : the primary he thinks resemblances of external objects.‡ Such are extension, solidity, figure, and motion. The secondary are colours, sounds, odours, and tastes ; and these he acknowledges have no resemblance to any thing external, but are mere powers in those bodies we denominate from them *red, sweet, &c.* to produce those sensations, by the operation of insensible particles, whose bulk, figure, or

* Encylop. Britt. Metaph. p. 543.

† Examination of Drs. Reid, Beattie, and Oswald, p. 151.

‡ Book 2. chap. 8. sec. 15.

motion,

motion, we cannot discover by any of our senses :* these powers are, therefore, perfectly unknown to us, at least through our senses. And, on the other hand, Dr. Reid justly remarked,† that “ Mr. Locke had not
 “ given due attention to the nature of sensation in general, when he affirmed, that the
 “ ideas of primary qualities, that is, the sensations excited by them, are resemblances of
 “ those qualities ; for that nothing like a sensation can be in an insensient being is self-evident, (just as Berkeley affirms.)

531. Secondly, Dr. Reid acknowledges, that by ideas of sense, Berkeley means sensations, as we have them by means of our senses ;‡ and that this author having laid down, that it must be evident to any one that takes a survey of the objects of human knowledge, that they are either ideas actually impressed on the senses, or else such as are perceived by attending to the passions and operations of the mind ; or, lastly, ideas formed by the help of memory and imagination, either compounding, dividing, or barely representing, those

* Sec. 13, 17, 18.

† 1 Reid, p. 365. ‡ 1 Reid, *Intell. Powers*, 267.

originally perceived by the aforesaid ways.*
 Dr. Reid owns he once believed this doctrine
 so firmly as to embrace the whole of Berkeley's
 system in consequence of it, and that sup-
 posing this principle to be true, this system is
 impregnable.† That nothing can resemble a
 sensation but a " similar sensation in the
 " same or some other mind; that to think any
 " quality, in a thing that is inanimate, can
 " resemble a sensation, is a great absurdity :
 " in all these points, the Dr. says, he perfectly
 " agrees with Berkeley.‡ Again, that the
 " evidence of an all-governing mind, so far
 " from being weakened, seems to appear in a
 " more striking light, upon his hypothesis,
 " than on the common one; the powers
 " which inanimate matter is supposed to pos-
 " sess, having always been the strong hold of
 " atheists, this fortress is most effectually
 " overturned, if there be no such thing as
 " matter in the universe."§

532. " If it be true, that by our senses we
 " have the knowledge of our sensations *only*,
 " then Berkeley's system must be admitted.

* Principles of Human Knowledge, sec. 1.

† 1 Reid, 243, 244. ‡ 1 Reid, 268.

§ Reid, 252.

“ But if there are objects of the senses which
 “ are not sensations, his arguments do not
 “ affect them : they may be things which do
 “ not exist in the mind, as all sensations do ;
 “ they may be things of which by our senses
 “ we have notions, though no ideas, just as by
 “ consciousness and reflexion, we have notions
 “ of spirits and their operations, without ideas
 “ or sensations.”* (No, we can have no *notion*
 of matter by the senses; if we could, we might
 explain what we mean by it, as we can ex-
 plain what we mean by notions gained by
 consciousness or reflection ; but of matter, as
 generally understood, we can give no intelli-
 gible account, as shewn N° 519—529.)

He also allows, that all our sensations might
 be as they are, though nobody had ever
 existed ;† and that the existence of bodies
 cannot be collected by reasoning from our
 sensations, or from any principle of human
 nature.‡

* Reid, 269. † Reid on the Mind, 107. ‡ Ibid. 115.

SECT. IV.

ORIGIN OF THE BELIEF OF THE EXISTENCE OF
MATTER.

533. By *matter* I understand an insensient being, supposed to be the cause or occasion of our sensations. Thus defined, it includes no repugnancy, but its existence is superfluous and at least highly improbable, as will be seen, N° 543. It can not be called a substance or *substratum*, as it has no known modification whatsoever.

534. *Belief* or disbelief are judgments, affirmative or negative, founded on some ground either real or apparent; when their grounds are solid and *rea*, though differing from those suggested by appearances, they are *speculatively* true, though apparently false. When the contrary, they are *mere* appearances, whether to the senses or to the imagination, and nothing more.

535. Thus when an oar obliquely placed, partly in water and partly in air, is judged to be straight, this judgment is speculatively and in reality true, though apparently to the sight it

it is false; and, on the contrary, when it is judged to be crooked, this judgment is apparently true, though speculatively and in reality false. So also, when space is judged to be extended beyond the limits of the universe, and even infinitely, as many have judged it to be, this judgment, apparently to the imagination, is true, though in reality false. By a similar delusion Descartes and his followers deemed solid extension boundless.

536. Now the belief of the existence of matter originated, and still rests, on similar delusions, and principally on the following :

537. First, the persuasion that we perceive distant tangible objects immediately by sight ; whereas we only instantaneously imagine and infer their existence, from their long-experienced connexion with visual objects, and certain motions of our eyes. This is owned by the most intelligent hyloists,* see N° 405, &c. Thus, what we see, is barely a sign of the tangible sensation we should have, or some other mind has, if in contact with the object. In fact, we never see and feel the same thing,

* Stewart on the Mind, 148, 149.

though

though we may things to which a common name is given ; thus I may be said to see and feel the same billiard ball, though in fact I see only its colour, and at most half its figure ; but I do not see its smoothness or hardness, no more than I can feel its colour ; the former are suggested to me by the sight, in consequence of the experienced association of the colour with those tangible sensations, which we know we actually have not ; now, of such sensations, thus suggested to us, and which we are certain we shall experience after traversing a certain distance, we imagine the causes to exist at that distance, and consequently that they are external to our minds, through our natural ignorance and habitual inattention to the Supreme Being, the only possible cause of our sensations. These supposititious imaginary causes are by the hyloists called *matter*.

538. So also a blind man, finding that he can successively feel the aggregate of the resisting sensations that compose his body, naturally imagines these parts to be external to, and distant from, his mind or principle of thought, which he cannot feel.

539. The same mistake, though in a lesser

leffer degree, is daily made with respect to founds ; for nothing is commoner than to say one hears trumpets, or the firing of guns, or the approach of carriages, though nothing can really be heard but the different modifications of found connected and long affociated with the above-mentioned circumstances of those bodies.

540. So also, when the known figure, colour, and magnitude, of an apple are seen, they immediately suggest the taste and smell ; and on this aggregate of sensations, a name is bestowed, which is that of an *apple*.

541. The second cause of this persuasion was suggested by the structure of language : this requires, most commonly at least,* adjectives and substantives. Now the same adjective is applicable to a variety of different substantives ; thus we say a good man, a good horse, a good house, &c. Frequently indeed the substantive with which the adjective is supposed conjoined, is not expressed ; thus Hudibras says, “ *better* is the only enemy to

* I say commonly, for in Hebrew, abstract words are sometimes used for adjectives ; so Paganinus translates the second verse of Genesis, *terra erat solitudo & inanitas*.

good;" but, as an adjective is imperfectly intelligible without reference to some substantive, the general term *thing* was invented, which denotes any substantive: then all sensations being expressed by adjectives, on account of their various applicability, as *red, fragrant, sweet, loud, hot, cold, hard, soft, extended, &c.* the mechanism of language necessarily supposes them to have some substantive to which their aggregate is applicable. This substantive was called a *thing*, or substance, though perfectly unknown, being unperceived by any of the senses, until a particular name was devised, which name was supposed to denote also that unknown thing, and to involve it in its signification: thus an apple was at first called a red, fragrant, juicy *thing*, before it was named an *apple*, which more expressly denoted the peculiarities of its taste, smell, colour, shape, hardness, &c. Thus these sensations were deemed to be modifications of this fictitious thing, which was called their *substratum*, and the supposed *substratum* of all sensational aggregates was by philosophers called *matter*.

542. Thirdly, men were led to think, that

there existed some substance foreign and extrinsic to them, by reason of the continued reappearance of many objects totally independent of them ; not reflecting, that all that was perceivable in these objects were mere sensations, as colour, taste, smell, &c. which could not exist but in some mind, though not perceived by their own though they reappeared to them by virtue of the laws fixed by the Author of nature. Hence that profound philosopher Mr. Turgot says, that existence, relatively to us, is the permanence of certain collections of sensations, which in similar circumstances constantly reappear the same, with alterations subjected to certain laws.”*

543. Thus the existence of matter, though in reality an absurd fiction, and therefore to be rejected in speculations where the mere truth of things is to be examined ; yet, being strongly and habitually suggested by the imagination and the mechanism of language, must, in all other cases wherein we speak of and are guided by mere appearances, be admitted as true ; but that we are forced to en-

* Vie de Turgot, p. 17.

tertain that belief, by the constitution of our nature, I cannot admit;* for we cannot be so framed as to be forced to believe a falsehood after an unprejudiced and thorough examination of any subject.

544. Of such belief, founded on the delusions of imagination, to which nevertheless language frequently conforms, we have many instances: thus we say the sun rises, moves round the earth, and sets, though it is known that this judgment is *speculatively false*; thus the existence of our antipodes was long treated as an absurd fiction, and is still so by the vulgar, because they can be imagined no otherwise than with their heads downwards. So even such men as Clarke, Locke, and Newton, thought there existed a boundless space beyond the limits of the universe. So, while present at a well-acted tragedy, we for a time imagine the actors to be the persons they represent, though we know them not to be so: in the same manner, in reading an affecting novel or romance, we are deluded into the

* Nor is it admitted by one of the most intelligent of Dr. Reid's followers, *Encyclop. Britt. Metaph.* p. 488. second column.

belief of the reality of the personages they present, and are affected nearly as if they were real, though we know them to be merely fictitious. With how much more efficacy must such delusions operate, which are co-eval with our birth, grow with our growth, are fortified by the prejudices of all around us, even by the language we speak, and are so difficultly detected ?*

SECT. V.

ADVANTAGES GAINED BY THE SPECULATIVE REJECTION OF MATTER.

545. First, by proving matter to be impossible, we extirpate the root of atheism, Manicheism, Sabeism, and modern materialism, errors which it is impossible to combat with equal effect on any other grounds; for of course it cannot be eternal, as atheists pretend; it cannot be derived from an evil principle, or be the source of evil; it can have no properties, either known or unknown, and therefore can never, on any supposition, either

* See Stewart's Outlines, sec. 302, 303.

feel or think ; nor can the sun, moon, or stars, be objects of worship, as they have no existence out of the minds that perceive them.

546. Secondly, we disencumber philosophy of various paradoxical assertions, whose admitted incomprehensibility, though supposed to rest on geometrical demonstrations, is disgraceful to human reason, and has given rise to scepticism, and furnished fanatics and mystery-mongers with a plausible pretext to insult and humble it ; such as the *infinite divisibility* of matter : the existence of extra-mundane space, to which many have attributed the incommunicable attributes of the Deity, and others have with no less absurdity considered as a divine attribute, will be seen to have no existence but in the mind, space being nothing more than the distance discerned betwixt tangible sensations ; and thus the contradiction arising from the supposition of the divine *immensity* filling all, even extra-mundane space, and yet to be unextended, is at once removed.

The nature of *forces*, and the *communication of motion*, are no longer unintelligible, if they are nothing more than the results of the settled

laws of the Divine agency: the presence of *powers* acknowledged to be inadequate to the production of the effects attributed to them, such as that of subtile particles, to produce sensations, will no longer be deemed necessary: the change which, according to St. Paul, is to take place in our bodies at the resurrection, is easily understood, as it denotes no more than an alteration in the laws by which the system of perceptions, which constitute our bodies, is at present governed.

547. Notwithstanding this speculative rejection, this word should be used, not only in popular language, wherein it is often taken figuratively, but also in that of natural philosophy, wherein it is employed as an abridged expression of *tangible sensations*.

SECT. VI.

OBJECTIONS TO THE ANTIHYLOISTIC SYSTEM ANSWERED.

I shall first mention those stated and answered by Berkeley himself; but substituting the word *sensation* for *idea*, which the Doctor had unfortunately employed where he meant sensations,

fations, as Dr. Reid candidly allows, Vol. I. p. 267.

First Dialogue.

548. First to the charge of scepticism, with which his theory had been unjustly branded,* he answers, that he who denies any thing, can no more be said to doubt, than he who affirms it, with the same degree of assurance.

549.—*Second Objection.* Sensible things being considered as so many modes or qualities, such as colours, tastes, smells, &c. cannot be conceived without some *substratum* of which they are the modes or qualities. This substratum is not indeed itself perceived by any sense, but we have a relative notion of it.

550.—*Answer.* If so, then it is spread under, or is the substratum of extension, as this, being perceived by sense, is a sensible quality. Yet, can any thing be spread under and support extension, which is not itself extended? It must therefore have an extension different

* I can hardly suppose professor Stewart to have called Berkeley's conclusions sceptical, and ranked them with those of Hume, otherwise than through inadvertence. See his Life of Dr. Reid, p. xc. That Hume himself should call them so, is not surprising.

from that under which it is spread, and this must be supported by another extension, and so on infinitely. (It was however on this mistaken opinion that language was founded, see N^o 541.) To form a relative notion of any thing, its existence must first be established; a mere nonentity can relate to nothing. And to say we cannot conceive qualities or accidents to exist, without conceiving a material support to them, is to say we cannot conceive them, without conceiving something which we cannot conceive.

551.—*Objection.* Do we not perceive the moon and stars at a great distance? Therefore they do not exist barely in the mind that perceives them.

552.—*Answer.* Do you not in a dream perceive many objects having the same appearance of distance? and yet no one concludes the apparitions of a dream to be without the mind.

553.—*Objection.* Does not sight suggest somewhat of *outness*, or distance?

554.—*Answer.* In approaching a distant object, the visible size and figure change perpetually; the sight therefore does not of itself immediately

mediately inform you that the visible object you immediately perceive exists at a distance, there being a continued series of visible objects during your approach; but from experience you collect what other sensations you will, according to the laws of nature, be affected with, after a certain succession of time and motion.

555.—*Objection.* But may not some things be perceived by sense, which are not immediately perceived?

556.—*Answer.* No, not properly speaking; when I look at a picture, for instance, of Julius Cæsar, I may be said in a manner to perceive him, (though not immediately) by the sense of seeing, but immediately I see no more than some colours, with a certain symmetry and arrangement of the whole: a person who had never heard of Julius Cæsar, would see as much and nothing more; but my thoughts, from memory of a description of him, are directed to that emperor. We may be said to perceive sensible objects in one sense of the word, when, from a frequently observed connexion, the immediate objects of one sense suggest to the mind others, perhaps, belonging to another sense; for instance, when
I hear

I hear a coach drive along the streets, the sound alone is immediately perceived, but by the experience I have had, that such a sound is connected with a coach, I am said to hear the coach. So, if I see a red-hot iron, the solidity and heat are not the immediate objects of sight, but are suggested to the imagination by the colour and figure which are properly perceived by that sense. But the thing called *matter* having never been known experimentally, can never be suggested, either by memory, or reason, or reflexion ; it cannot be the archetype of any sensation, for nothing can resemble a sensation, but another sensation or idea.

557.—*Objection.* May not matter be the cause of sensations, concurring in their production by its motion ; or at least their occasion ?

558.—*Answer.* No, for *matter*, in the common signification of the word, denotes an inert, unthinking, solid, moveable, extended substance ; now how can an inactive substance be a cause ? how can an unthinking substance be a cause of thought ? It has already been proved, that a solid extended substance was impossible.

impossible. Motion is a sensible thing, and therefore passive; when I stir my finger, the finger is passive, but the will that produced that motion is active. The existence of a thing, whose connexion with another thing is not necessary, must first be proved before its causation can be affirmed. And certainly the hyloists can never produce any proof of the existence of matter independent of its connexion with sensations; which connexion they allow to be arbitrary.* Ante, N° 532.

559. Nor can it be the unknown *occasion* of our sensations; for, even granting its existence to be possible, yet to enable it to be an occasion, it should be present to the mind, which is not even pretended: the regular production of our sensations, that is, the order and regularity observed in the course of nature, is sufficiently accounted for, by the wisdom and power of God, to which at last we must have recourse; such occasions resulting from an unintelligible substance, are therefore useless, and their supposition unphilosophical.

560.—*Objection.* Not being able to conceive a thing, is no argument against its exist-

* Reid on the Mind, 107, 115. Stewart on the Mind, 92.
ence;

ence; therefore, though we cannot conceive what matter is, we are not justified in denying its existence.

561.—*Answer.* That from a cause, operation, sign, effect, or other circumstance, there may reasonably be inferred the existence of a thing not immediately perceived, and that it were absurd to argue against the existence of that thing, from having no direct or positive notion of it, I freely own; but, where there is nothing of all this, where neither reason nor revelation induce us to believe the existence of a thing, nor the most inadequate or faint idea pretended to, the inference must be that nothing at all is meant.

562.—*Objection.* Still it would seem the reality of things cannot be maintained, without supposing the existence of matter.

563.—*Answer.* Let us fix on some particular thing, my *glove* for instance; is it not sufficient evidence to me of its existence, that I see it, and feel it, and wear it? Can I be more assured of its reality, by supposing that some unknown thing, which I neither did nor can see, exists in an unknown manner, in an unknown place, or in no place at all? How
can

can the supposed reality of that which is intangible, be a proof that any thing tangible exists? or of that which is invisible, that any thing visible, or in general of any thing that is imperceptible, that a perceptible thing exists? Matter has been proved to be impossible in every known sense of the word; and to prove the impossibility of any thing, nothing more can be required: it cannot be expected that a repugnancy should be shewn betwixt ideas or notions, where there are no ideas or notions at all.

Third Dialogue.

564. — *Objection.* From all that has been said, it must be concluded that we know nothing at all; our faculties are too narrow and too few. You may know indeed that fire appears hot, and water fluid, but this is no more than knowing what sensations are produced in your mind, upon the application of fire or water to your organs of sense; but their internal constitution and true nature is unknown: in pretending that you know the true nature of things, by the appearances in your own mind, you act as wisely as he, that should conclude that two men were of different

ferent

ferent species, because their clothes were not of the same colour.

565.—*Answer.* All this strange scepticism proceeds from supposing that the real nature, or essence of sensible things, should be distinguished from their orderly and regular appearance in different circumstances ;* to be plain, real things are those which we see and feel, &c. and nothing else : a piece of sensible bread which I see, feel, and taste, will stay my stomach, better than ten thousand times as much unintelligible bread, which I can neither feel or taste. I cannot help thinking that colours and sensible qualities are on the objects ; that snow is white, and fire hot, &c. and not certain unperceived substances : that a thing should be really unperceived by my senses, and at the same time not really exist, is to me a plain contradiction, since I cannot abstract, even in thought, the existence of a sensible thing from its being perceived : wood, flesh, iron, &c. I should not have known, but that I have perceived them by my senses ; and things

* I have added in *different circumstances*, for bread analysed affords different appearances, &c. but these also are orderly and regular.

perceived by the senses are immediately perceived, and things immediately perceived are sensations, and these cannot exist without the mind; and when actually perceived, there can be no doubt of their existence; I may as well doubt of my own being as of their existence.

566.—*Objection.* But supposing you were annihilated, is it not possible, that things perceivable by sense, may still exist?

567.—*Answer.* It is, but it must be in another mind.

568.—*Objection.* Since you conceive the existence of God, without having any idea of it, may you not conceive the existence of matter, without having any idea of it?

569.—*Answer.* The notion of God is obtained by reflecting on my own soul, heightening its powers, and removing its imperfections: I know him by reflection and reasoning of my own mind, and of my own sensations and ideas, I have an immediate and direct knowledge; and by the help of these I apprehend the possibility and actual existence of other spirits; and from the dependance I find in myself, of my own being and sensations, I infer the existence of God and his knowledge

knowledge of all things ; but as to matter, I neither can perceive it directly, as it involves a contradiction, nor apprehend it by similitude to something else, nor yet collect it by reasoning ; I do not deny its existence because I have no notion of it, for many things exist of which I have no notion, but then these things must be possible, that is, nothing inconsistent must be included in their definition ; and though we believe things to exist, which we do not perceive, yet we may not believe that any particular thing exists, without some reason for such belief ; I know what I mean, when I affirm there is a spiritual substance, or support of sensation or ideas, that is, a spirit that knows and perceives them ; but I do not know what is meant, when it is said, that an unperceiving substance hath inherent in it either ideas or the archetypes of ideas. It is granted, we have neither an immediate evidence nor a demonstrative knowledge of the existence of other finite spirits ; but it will not thence follow, that such spirits are on a foot with material substances : if to suppose the one be inconsistent, and it be not inconsistent to suppose the other ; if the one can be inferred by no argument, and there is a probability for the other ;

if

if we see signs and effects indicating distinct finite agents like ourselves, and see no sign or symptom whatever that leads to a rational belief of matter; I say, lastly, that I have a notion of spirit, though I have not, strictly speaking, an idea of it: I do not perceive it as an idea, or by means of an idea, but know it by reflection.

569^b.—*Objection*. Notwithstanding all you have said, to me it seems, that according to your own way of thinking, and in consequence of your own principles, it should follow, that you are only a system of floating ideas, without any substance to support them. Words are not to be used without a meaning; and as there is no more meaning in spiritual substance, than in a material substance, the one is to be exploded as well as any other.

569^c.—*Answer*. How often must I repeat, that I know or am conscious of my own being; and that I myself am not my ideas, but somewhat else; a thinking active principle, that perceives, knows, wills, and operates about ideas. I know that I, one and the same self, perceive both colours and sounds: that a colour cannot perceive a sound, nor a sound a

colour: that I am therefore one individual principle, distinct from colour and sound; and, for the same reason, from all other sensible things and inert ideas. But I am not in like manner conscious either of the existence or essence of matter; on the contrary, I know that nothing inconsistent can exist, and that the existence of matter implies an inconsistency. Further, I know what I mean, when I affirm, that there is a spiritual substance or support of ideas; that is, that a spirit knows and perceives ideas; but I do not know what is meant, when it is said, that an unperceiving substance hath inherent in it, and supports, either ideas or the archetypes of ideas. There is therefore, upon the whole, no parity of case between spirit and matter.

570.—*Objection.* Ask the first man you meet, and he will tell you to be perceived is one thing, and to exist another thing, and laugh at you if you tell him, a tree, for instance, exists only in his mind.

571.—*Answer.* I am satisfied; ask your gardener why he thinks yonder cherry-tree exists in the garden? He shall tell you, because he sees and feels it. Ask him why he
thinks

thinks an orange tree not be in the garden, he will tell you, because he does not perceive it. He certainly believes it to exist, even when unperceived, but the reason is, because he thinks its colour, hardness, and other sensible qualities, exist though unperceived, just as he believes the sun to rise and set, and would laugh at you, if you told him the earth turned round the sun : in these cases he speaks from ignorance and prejudice, as every one must allow.

572.—*Objection.* But may we not say, the existence of a sensible thing consists in being perceivable but not in being actually perceived ?

573.—*Answer.* What is perceivable but a sensation or an idea ? And can either exist without being actually perceived by some mind ?

574.—*Objection.* According to your notion, what difference is there betwixt real things and the chimeras formed by the imagination, or the visions of a dream ?

575.—*Answer.* Ideas formed by the imagination are faint, indistinct, and dependant on the will ; whereas the perceptions of sense

are vivid and clear, and have not a like dependance on the will, and are perfectly coherent and regular: the visions of a dream are dim, irregular, confused, and unconnected with the preceding and subsequent transactions of our lives. In short, by whatever method you distinguish, on your scheme, realities from chimeras, the same will hold upon mine; since these differences are perceivable; and I do not deprive you of any thing you perceive.

576.—*Objection.* By making God the author of all the motions in nature, you make him the author of those that are sinful.

577.—*Answer.* The moral turpitude of sin does not consist in the physical action or motion, but in the deviation of the will from the laws of reason and religion; thus killing in one's own defence, is not thought sinful, though the outward act be the very same as that in the case of murder. Besides, God is not the only agent who produces motions in bodies; the human mind hath certain limited powers of producing it under the direction of its own will, ultimately derived from God.

578.—*Objection.* But is not the *momentum*
of

of bodies in motion in a compound ratio of the velocity and quantity of matter contained in them ?

579.—*Answer.* True, taking matter to denote the extension and solidity perceived by the senses ; and *gravity* is proportional to the quantity of matter, so understood, but not to that of a supposed *substratum*.

580.—*Objection.* Can it be supposed that all the world are deceived in believing the existence of matter ?

581.—*Answer.* It may : have not mankind been deceived in believing, that colours and other secondary qualities, as they are called, are external to the mind ? That the earth stands still, and that the sun and stars move round it, &c. ?

582.—*Objection.* The motion of the earth is not perceived, and yet it exists.

583.—*Answer.* It is not perceived by us, but it is by other minds, and would by us, if we were placed at a certain distance from it ; that is, if we had experienced a certain series of sensations ; for motion exists only in the mind.

584.—*Objection.* Since, according to you,

men judge of the reality of things by their senses, how can a man be mistaken in thinking the moon a plain, lucid surface, about a foot in diameter? Or a square tower, seen at a distance, round? Or an oar with one end in the water crooked?

585.—*Answer.* He is mistaken, not with regard to what he actually perceives, but in the inference he makes from his present perceptions; thus, in the case of the oar, what he immediately perceives by sight is certainly crooked, but if he thence conclude, that upon taking the oar out of the water, he shall perceive the same crookedness, or that it would affect his touch as crooked things are wont to do, in that he is mistaken; in like manner, if he shall conclude, from what he perceives in one station, that, in case he advances towards the moon or tower, he should still have the same perceptions, he is mistaken; but his mistake lies not in what he perceives immediately and at present, (it being a manifest contradiction he should err, in respect to that) but in the wrong judgment he makes concerning the perceptions he apprehends to be connected with

with those he immediately perceives or concerning those which, from what he perceives at present, he imagines he would have in other circumstances.

586.—*Objection.* If, whatever perceptions we receive from without are in the mind that impresses them, the sensations of pain and uneasiness are in God, or, in other words, God suffers pain, which is absurd.

587.—*Answer.* That God knows what pain is, even every sort of painful sensation, and what it is for creatures to suffer pain, is certain; but to suppose he can suffer pain, is impossible. (See N^o 395.)

588. We are chained to a body; that is to say, our perceptions are connected with corporeal motions. By the law of our nature, we are affected by every alteration in the nervous parts of our sensible body; which sensible body, rightly considered, is nothing but a complexion of such qualities or perceptions as have no existence distinct from being perceived by a mind: so that this connexion of sensations with corporeal motions, means no more than a correspondence in the order of nature betwixt two sets of things immediately

perceivable. But God is a pure spirit, disengaged from all such natural ties.

589.—*Objection.* If the true nature of a thing be discovered by the senses, why is not the same figure, and other sensible qualities, perceived all manner of ways? And why should we use a microscope, the better to discover the true nature of a body, if it were discoverable by the naked eye?

590.—*Answer.* The reason is, that, to avoid multiplicity of names, men combine together, and denote by one name, sensations received by different senses, or by the same sense at different times, or in different circumstances, when observed to have some connexion in nature, either with respect to co-existence, or succession. Thus a father and all his children have the same surname; thus the colour, smell, taste, and tangible sensations are referred to one name: for instance, a *rose*, though perceived by different senses, and if any of these sensations be missing, we alter the name; and hence when I examine, by my other senses, the coloured tangible object which I had perceived, or was suggested by the sight, it is not to perceive better what I
had

had perceived by sight, the object of one sense not being perceived by another sense ; but my aim is to know what sensations are connected together ; for the more a man knows of the connexion of these, (as by chymical analysis, &c.) the more he may be said to know of the nature of things ; so when I look through a microscope, it is not to perceive more clearly what I already perceive by my naked eyes, but to find what different perceptions I may receive through that instrument, for the senses do not in all circumstances present the same sensation. See N^o 450.

591.—*Objection.* Is it not your opinion, that by our senses we perceive only the sensations in our own minds ? does it not therefore follow that no two men can see the *same* thing ?

592.—*Answer.* No, if words be taken in the usual sense ; for men generally call that the *same*, when no distinction or variety is perceived ; and even when some variety is perceived, the word *same* is often used by some, and not used by others ; thus, suppose a house, whose walls and outward shell remaining unaltered, the chambers are all pulled down, and new one's built in their place, some would
call

call this the *same*, and others *not the same* house: but is not this a mere dispute of words? some attending only to the similar part of the object, and some only to the dissimilar, for all would agree in their thoughts of the house itself.

593. The objection here made applies equally to the hyloistic scheme, for even the hyloists must allow, that the *colour* seen by one person, is not, in the strict sense, that seen by the other, each perceiving only *his own* sensation.

594.—*Objection*. How can extended things, such as houses, trees, &c. be contained in an unextended substance, as the mind is?

595.—*Answer*. They cannot be said to be contained in it, in the gross literal sense, as bodies are said to exist in a place; all that is meant is, that they are perceived. In the literal sense, extended things are said to be contained within other things, when their parts are perceived to be within the parts of the other things; but the parts of trees, &c. are not so perceived within the parts of the mind, as the mind has no parts.—This objection equally affects the hyloists, for they also
must

must allow, that the *ideas* of extended things exist in an unextended mind.

596.—*Objection.* You will not deny, that trees may be found in a desert, where they were never perceived by man.

597.—*Answer.* True, but they were perceived by other minds, at least by the Divine, otherwise they could not be said to exist; they could have neither colour, taste, smell, extension, or solidity, since these have been proved to be mere perceptions.

598.—*Objection.* After all, our dispute is rather about words than things; we agree in the thing, but differ in the name: that we receive sensations from without is evident, and it is no less evident, that there must be powers without the mind, adequate to their production; and as these powers cannot exist by themselves, some subject of them must necessarily be admitted: this I call *matter* and you call *spirit*; this is all the difference; this being is not extended, but it hath the power of exciting in you the perception of extension; it is also active, since it exercises powers. Or you may call it a third nature distinct from
matter

matter and spirit ; you cannot call it spirit, as that implies the power of thinking also.

599.—*Answer.* I must call it spirit, in order to have some notion of what I say : but I have no notion of any action distinct from volition, neither can I conceive volition to be any where but in a spirit ; therefore, when I speak of an active being, I am obliged to mean a spirit: besides, what can be plainer, than that a thing which hath no ideas in itself cannot impart them to me ; and if it has perceptions, surely it must be a spirit. I know not what you mean by a third nature.

600.—*Objection.* How can creation be understood in your system ?

601.—*Answer.* Creation consists in rendering perceptible, things before imperceptible to finite minds, and in the order and gradation related by Moses. That such beings were present at the time of the creation, appears by Job, chap. xxxviii. ver. 5. 7 : “ where wast thou
 “ when I laid the foundations of the earth,
 “ (the poles) when the morning stars sung
 “ together, and the sons of God shouted for
 “ joy ?” Their perceptions were not sensations, as they had no corporeal organs, but they
 might

might exactly resemble them, as our own perceptions constantly do when we dream, though not received by the intervention of the senses. At the time of the creation, a change, corresponding therewith, took place in the Divine intellect: this must be confessed, whatever system is embraced: objects must then have been presented to the Divine mind in a different manner from that in which they were known to him from all eternity, when they were merely possible. See N° 395.*

Objections stated in Berkeley's Principles of Human Knowledge.

602.—*Objection.* Does it not sound harsh to say, we eat and drink, and are clothed, by sensations?

* Berkeley explains creation in a different manner; he thought no change took place in the Divine intellect, but that the archetypes of sensible things existed in the Divine mind from all eternity; but that creation consisted in rendering them perceptible to finite minds: if that were all, there could be no creation of sensible things, if spirits did not exist, which I would not affirm. I acknowledge no archetypes in the Divine mind; his mode of knowledge is above our comprehension.

603. *Answer.* It does so : the word sensations not being used in common discourse to signify the several combinations of sensible qualities, which are called *things* ; but this does not concern the truth of the proposition, which, in other words, is no more than to say we are fed and clothed with those things which we *immediately perceive* by our senses. Each aggregate hath its own particular name ; thus a certain combination of *hardness, softness, colour, and peculiar taste*, is called *meat* ; another, *varying* from this in some particulars, is called *bread*, &c. ; other combinations of qualities *immediately perceived* are called *cloth*, &c. : it is true, neither the butcher nor the clothier think these to exist only in their minds ; but the reason is, that they think the sensations themselves, as the colours, tastes, &c. to exist without, and independently of their minds ; they think colours exist even in the dark, that vinegar is sour, sugar sweet, *brandy hot*, even before they are tasted. Of the powers of exciting these sensations, they never think at all ; yet it is now universally acknowledged by philosophers, that these qualities exist only in the mind, and even that those they call *powers*,
are

are in reality impotent, since to excite sensations they are obliged to have recourse to the Divinity.

604.—*Objection.* Do we not see things actually without us, or at a distance from us, which, consequently, do not exist in the mind; it being absurd to think a thing seen at the distance of several miles should be as near to us as our own thoughts?

605.—*Answer.* Do not we often in a dream perceive things as existing at a great distance? Do we not see things at a distance in a mirror? Are not extensive prospects remembered or represented, ideally or imagined? Yet all these exist only in our own minds; but it has already been proved, that the distance, or outwardness, of tangible objects (which are principally denoted by the name of things,) is neither immediately perceived by sight, nor judged of by lines or angles, or any thing that hath a necessary connexion with it, but is barely suggested by certain ocular sensations, which, in their own nature, have no similitude or relation to distance, or things placed at a distance; but by a connexion taught us by experience, they signify and suggest distant sensations

sensations to us, nearly as the words of a language suggest the ideas they are made to stand for.

606.—*Objection.* If extension and figure exist in the mind, must not the mind be extended and figured ?

607.—*Answer.* No, no more than it can be called red or green when it perceives those colours ; must not all confess that we have ideas of plains, mountains, rivers, &c. ? Yet no one thence infers that the mind, or those ideas, are extended. To have extension attributed to the mind, it were necessary that the mind should have parts, but to perceive extension that is not necessary : figure, in like manner being the termination of extension, is perceived by the mind, but cannot be attributed to it, having no extension.

608.—*Objection.* Is not the concurrent universal assent of mankind an invincible argument in behalf of matter, or the existence of external things ?

609.—*Answer.* Men, indeed, act as if they believed the immediate cause of their sensations were some senseless unthinking being ; but that they should clearly apprehend any
meaning

meaning marked by these words, and form thereof a settled *speculative* opinion, this I am not able to conceive : this is not the only instance wherein men impose upon themselves by imagining they believe those propositions they have often heard, though at bottom they have no meaning in them.—Do not the bulk of mankind look on the antipodes and motion of the earth as monstrous absurdities ? The universal mistake originates in this, that the Supreme Being, the true and sole cause of our sensations, is not marked out to our view by any particular collection of sensible qualities, as human agents are by their size, complexion, limbs, and motion ; and because his operations are constant, regular, and uniform ; whenever the course of nature is interrupted by a miracle, or even varied by a prodigy, or rare event, men are ready to own a superior agent.

610.—*Objection.* To what purpose then serves the various organization of vegetables, and the admirable structure of the parts of animals ?

611.—*Answer.* Though the fabrication of all these parts and organs be not absolutely necessary to the production of any effect, yet

it is necessary to the production of things in a constant regular way according to the laws of nature, as there are several laws that run through the whole chain of natural effects: these are learned by observation and study, and may be applied to the construction of artificial things for the use of mankind: thus a telescope is formed exactly on the same principles as the human eye, and the image formed on the retina evidently serves for no other purpose: if men had properly attended to the structure of the eye, telescopes might have been invented many ages ago;* and it was by attending to it, that a defect in dioptric telescopes was actually mended.† By attending to the structure of the ear, acoustic instruments have been invented; and from observations on the structure of the human neck, other mechanisms have been contrived.‡

Many more such inventions will probably occur in future ages; the process of incubation has taught men the artificial multiplication of birds to any desired degree:

* See the similarity of both instruments of vision beautifully illustrated in Paley's *Natural Theology*, p. 10.

† Ibid. p. 23.

‡ Ibid. p. 100.

the art of brewing originated from experiments made on corn at different stages of its growth; and by the division of its sprouts, a method has been found of multiplying it to an astonishing degree. Even where the processes of nature in animals and vegetables are not perceived by us, still the laws that govern their production remain, and cause them to be perceived by us, when exposed to our view in that particular manner and state which they should exhibit if they had been all along perceived. Dr. Paley well remarks, that it is only by the display of contrivance that the existence, the agency, and the wisdom of the Deity, could be testified to his rational creatures. Nat. Theology, p. 42.*

SECT. VII.

OBJECTIONS OF MR. DESTUTT TRACY.†

612. This gentleman sets out with such violent prejudices, so grossly misconceives

* The answer to the objections stated in this number is so complete, that even Dr. Doddridge allows its validity, in the midst of his gross misconceptions of the Berkeleian system. See his Lectures, vol. I. p. 159.

† Mem. of the French Institute, vol. III. p. 515.

Berkeley's tenets, entertains such open contempt for all preceding philosophers, that he scarcely thinks it necessary to employ any other argument than ridicule.

He tells us, that " when first he ventured to speak of metaphysics, he did not think that *evidence itself* would become a subject of debate; that he did not think it necessary to inquire whether the universe itself was not a vain *phantom*, and life a succession of *illusions*." How gross a misrepresentation! as if Berkeley had not clearly shewn the difference betwixt illusions and realities, he adds, " without losing myself in chimeras, I took things as they *truly* are:" an Algonquin would say as much, if the Copernican System were exposed to, and rejected by him. And again, " this opinion might I think be simply rejected as absurd, if two celebrated men had not mentioned it, or something very near it." These I suppose were *Descartes* and *Malbranche*; but he might have added more; for instance, *Condillac*, who thought it at least doubtful whether extension be any thing else than a sensation; * *D'Alembert*,

* *Traité des Sensations*, Part IV. chap. v. p. 339. in 12mo. *bert*,

bert, who, in 1763, though himself a materialist, said, that Berkeley's System, though absurd, could not be refuted; *Turgot*, who expressly asserts, that existing objects were nothing else but systems of simultaneous sensations, constantly re-appearing in similar circumstances, whose variations were governed by certain laws.* Mr. *Merian*, in many parts of the *Memoirs of Berlin*, evidently inclines to the Berkeleyan theory; nor is *Schawb* very distant from it. *Leibnitz* thought bodies to be phænomena; I say nothing of many Englishmen of distinguished penetration and talents already mentioned, N° 529.—Yet Mr. *Tracy* thinks it a great hardship to be obliged “*seriously* to examine the question, it
 “ being no other (he says) than whether his
 “ own body be something or nothing: a
 “ question (says he) which would not have
 “ existed, if his predecessors had not thought
 “ proper to deny evidence itself, and exerted
 “ all the subtlety of their wits to combat the
 “ testimony of their consciousness.” Not satisfied with these and other extravagant as-

* *Vie de Turgot*, p. 17.

sertions, he calumniates Berkeley, pretending that he affirms we are ourselves parts of the Supreme Being.*

613. Secondly, he asserts the whole of Berkeley's system is grounded on a perpetual equivocation, confounding the impression made on a sentient being, which we call a sensation, and the quality which resides, or may reside, in another being, which is the cause of this sensation.†

614. Yet so far from confounding sensation with the cause of sensation, Berkeley peremptorily denies that it can have any other cause but the Supreme Being; and that any quality residing in any other being can be the cause of it.

615. Thirdly, he tells us, "that, Berkeley
 " begins by owning the intervention of the
 " senses; now by the senses suppose organi-
 " zation; these organs are material and sen-
 " sible things; and if, as Berkeley pretends,
 " sensible things are only sensations, the or-
 " gans must also be sensations; Quelle epou-
 " vantage Galimathias!"

616.—*Answer.* It is certain sensations, even

* P. 518.

† P. 519.

of our own bodies, are obtained only through the intervention of the organs of the different senses; the organs of sense, when felt or exposed to view, are known to us; but when hidden, as many of them are, they are known to the Divine Mind, and that succession of laws by which they are governed, exists in the same manner as if they were actually perceived by ourselves. See N° 505, and the succeeding numbers.

617. Fourthly, “ Berkeley’s whole system would be subverted, if it were denied that any thing but mind were capable of sensations: one would be much embarrassed to prove why *mind and spirit* alone should have the exclusive privilege of having sensations, and why this prerogative should be incompatible with the nature of what is called *body*.”

618.—*Answer*. No metaphysician would be in the least embarrassed, taking *body* in the sense in which hyloists commonly understand it, for an inert, solid, extended, divisible substance.

619. This is all I find objected to Berkeley in this boasted refutation; nay it concludes

with an almost direct avowal of the truth of his theory; for Mr. Tracy tells us, that two of Berkeley's assertions are undeniably true: namely, first, that there does not exist a being that can be called *matter*; but individual bodies alone exist, and not matter in general. And, secondly, that these bodies are known to us, only by the sensations which they cause; and that, relatively to us, *nothing exists but sensations and ideas*. Now, excepting the false supposition of causation, these assertions are perfectly Berkeleian. It is true he attributes to Berkeley an assertion which he deems hypothetical, namely, that the cause of our sensations exists in a mind; now Berkeley strongly contends that the will of the Supreme Being, and not barely his thoughts, is the cause of our sensations.

Objections of the anonymous Author of the article Metaphysics, in the British Encyclopædia, p. 545.

620. This writer is by far the most candid, unprejudiced, and clear-sighted, of all the opponents of Berkeley; yet I cannot help thinking

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ing he has been betrayed into an error by not sufficiently attending to the doctrine of that great metaphysician. He thinks Berkeley lost sight of that proper and accurate distinction first laid down by him, betwixt *ideas* and *notions*; and as he admits we have no *idea* of spirit, because it cannot be perceived but only by the effects it produces: but yet it must be owned we have a *notion* of spirit, and also of the operations of the mind, such as willing, loving, hating, as we understand the meaning of those words; so this author thinks,

First, that what is here said of spirit, is equally applicable to material or solid substances; we have no idea, he says, of solidity or extension, because they are not originally impressed on the senses; but we have distinct, though relative, notions of them, for they are clearly perceived by the effects they produce; this he thinks at least possible, as the bishop owns, that from a cause, effect, operation, sign, or other circumstance, we may reasonably infer the existence of a thing not immediately perceived, and that it were absurd to argue against its existence from our having no direct or positive notion of it. Such,
the

the author affirms, is exactly the case with respect to solid substances; these, he says, are not immediately perceived, but we infer their existence from effects, signs, and other circumstances, and we have very clear, but relative notions of them. Thus a man can open or shut his empty hand; but when he grasps an ivory ball, of some inches in diameter, he feels, that though the same power is exerted, his hand cannot be shut; he is conscious there is no change in himself, and being certain that every effect must have a cause, he infers, with the utmost confidence, that the cause which prevents his hand from shutting is in the ball; or, in other words, that the thing which communicates to his eye the sensation of colour, and impresses on his hand a sensation of touch, must be solid and impenetrable. Solidity, however, he adds, is not the sensation itself, it is only the cause of the sensation, and therefore is so far from being an idea in our minds, that we are conscious our notion of it, is that of a thing totally different from all our ideas of a thing external, at least to our minds. This notion is merely relative, and inferred from the effects produced

duced on our senses: that it is the same thing that communicates to our eye the sensation of colour, and has the power of resisting the compression of our hand, is evident, because, when the ball is thrown away, the resistance as well as the actual sensation vanish.

621. I have given this plausible reasoning at full length, as its links are so connected, that each would lose much of its apparent force if disjoined: but, to detect the fallacy of each, it is necessary to examine them separately, though much of it has already been obviated by Berkeley himself. See N^o 569.

622. And, first, I deny that it follows, that we have any notion of matter or material substance from this, that we have a notion of spirit though we can have no idea of it; for we are conscious, that all the sensations and operations of our minds are the sensations and operations, each of the same mind; of this we are intuitively certain; and by this knowledge we define what we mean by *spirit*, and are said to have a *notion* of it: but can we say with certainty, that the external cause of our sensations is matter? The author himself, p. 547, allows we cannot: nay, he *must* allow

allow it, for those who contend for the existence of matter, own that it cannot act upon spirit, and are obliged to call in the Supreme Being. So that its existence cannot be inferred from any effect, operation, sign, or other circumstance: its probability he rests on the general voice of mankind, p. 547. But of how little avail that is, has been shewn. N° 609, and its origin in the fourth section of this chapter. Moreover, a notion of it is impossible, as it involves a repugnancy. See N° 529. 550. 569.

623. Secondly, solidity is a mere sensation, and not a notion, for it is felt, as Dr. Reid himself acknowledges; nor can any solid substance be inferred from it. A hand, grasping a solid ball three or four inches in diameter, cannot be closed, though an empty hand can; but what prevents its closing but the sensation of resistance, called *solidity*? and, that this sensation is merely relative, and not a thing that has an independent existence, is evident, since a hand much stronger than the human, would find it perfectly soft or flexible. See N° 480. Water which, relatively to us, is
 .so

so soft, is relatively to some insects so hard, that they can walk and run upon it.

624. Thirdly, being intuitively certain, that every effect has a cause, the author thinks it may be inferred, that the cause which prevents the hand from shutting is in the ball. But he should recollect, that the sensation of resistance is included in the signification of the word *ball*, and in this sense it may be said to be in it; and it is this sensation that prevents closing the hand: no other cause produces that effect, but the cause of the sensation itself, namely, the Supreme Being. That an unknown fictitious thing should be included in the ball, is perfectly unintelligible. To say we have a notion of such a thing, is mere begging and taking for granted the very point in question, and without any sort of necessity, since the Divine intervention must at last be owned, which alone is sufficient.

625. Fourthly, the author adds, that it is the same *thing* which communicates to our eye the sensation of colour, and has the power of resisting the compression of our hand, is evident. This is true, if the word *thing* be taken for an aggregate of sensations, as it should be.

be, for colour is one of that aggregate; but it cannot be inferred, that the sensation of resistance or solidity, is that which causes colour, which is I suppose what is meant by communication; the colour is referred to it only by a long and early association.

626. Again, the author contends, that Berkeley's argument, in putting the primary qualities on the same footing as the secondary, is fallacious; for that it is not true, as Berkeley asserts it to be, that the primary qualities are inseparably united with the secondary; for the author shews, that the extension, solidity, and rotundity, of a ball, may be perceived in the dark. This is true with respect to colour, for blind men perceive rotundity and solidity. But the bishop does not confine his argument to colour; his words are, "for my own part, I see evidently, that it is not in my power to frame an idea of a body extended and moved; but I must withal give it some colour, or other sensible quality, which is acknowledged to exist only in the mind." Principles of Human Knowledge, sec. X. Thus his argument remains unanswerable; for heat, cold, or warmth, are allowed to be secondary qualities, and to exist only in the mind; yet
solidity

solidity or extension cannot be abstracted from one or other of these, when any distinct sensible impression is made on the organs of tact; they must exist where these secondary qualities exist, namely, in the mind alone.

627. Lastly, the author candidly owns, that by the immediate agency of the Deity all our sensations might be what they are, though matter had no existence; and that Berkeley had proved this, by unanswerable arguments, and that he obviated the irreligious sophistry of Hume. It is strange then he did not perceive that matter was entirely useless, since, even admitting its existence, the Divine agency must still be called in: and since he allows that every thing might go on just as well, even if it did not exist, he should also allow that its existence is at least doubtful,

Objections of Dr. Reid.

628. This justly celebrated professor informs us, he had once embraced the Berkeleyan doctrine, but had afterwards renounced it, in consequence of his having rejected that of ideas: his objections are so widely diffused through several volumes, that it is not easy to collect

collect them ; nor indeed is it necessary, for most of them have been already obviated. His principles, I allow, are more subtle and ingenious than those commonly adopted by Berkeley's opponents, but their truth is far from being proved, as I shall have occasion to state in the appendix to this section.

629. First, the Doctor tells us, " that by his
 " senses he perceives figure, colour, hardness,
 " softness, motion." This nobody will dispute; " but these (he says) are qualities, and
 " must be in something, that is figured, coloured, hard or soft." This has been answered, N^o 624. Figure, colour, &c. are not in any thing distinct from the mind, and by this they are perceived, but not contained in the gross literal sense. See N^o 595. 606. " It is
 " not to these qualities, but to that which is
 " the subject of them, that we give the name
 " of body." I shall here content myself with examining one of these qualities, namely colour. The Doctor tells us, that " all men
 " who are not tutored by modern philosophy,
 " understand by colour, not a sensation of the
 " mind, which exists only when perceived,
 " but a quality, or modification of bodies,
 " which

“ which continues the same, whether seen or
 “ not.”—“ When a coloured body is pre-
 “ sented, there is a certain apparition to the
 “ eye or to the mind, which we call the *ap-*
 “ *pearance of colour*, and this exists only when
 “ perceived; but by the constitution of our
 “ nature we are led to conceive it as a sign
 “ of something external: it suggests the con-
 “ ception and belief of some unknown qua-
 “ lity which occasions the idea; and it is to this
 “ quality (which is altogether unlike colour)
 “ that we give the name of colour.”*

630. Now I would venture to appeal to
 any unprejudiced person, whether it be not to
 what we *see*, and not to any unknown qua-
 lity that we do *not see*, that all mankind give
 the name of *colour*: † it is true they think it
 to continue when unseen, but that is because
 they think the very thing *they see* (which
 philosophers call the sensation) remains in the
 dark; nor do they ever imagine any cause or
 quality causing colour but *dying ingredients*.
 They have the same opinion of the perma-
 nence of colour when unseen that the Doctor

* Reid on the Mind, 171, 172, 173.

† See Stewart, 579.

has of the permanence of solidity and extension when *unfelt*; and as he thinks these immediately perceived, and not their causes, they also think colours immediately perceived, and not any fictitious causes. How much would they be surprised if they heard of the distinction betwixt *colour* and *the appearance* of colour, which no way resembled colour? According to the Doctor, the appearance of colour ought to be the appearance of those modifications or qualities which the Doctor calls real colours; yet, so far are these from *appearing*, that he owns them to be unknown; and though he says they are unknown, yet still he says they are unlike to any colour.

631. The reasons that induce the Doctor to call these qualities or modifications of bodies *real* colours, are, first, “that these modifications remain when the appearance of colour ceases.” But who can tell, since they are unknown? And, even if they did remain, why should they be deemed the causes of colour, to which they are altogether unlike, and which they are altogether incapable of producing, any more than the other qualities of a coloured body, which are also thought to remain when unperceived? I say
causes,

causes, because they cannot be considered as *signs*, since they are unknown. When colours are unperceived by any other mind, they exist only in the Divine. The laws of the Supreme Being are the only cause, either of their existence or re-appearance, as all must allow. The causes the Doctor assigns, and which he thinks mankind call *real colours*, are altogether unintelligible; for, as Locke justly observes,*

“ sensations discover nothing of bulk, figure,
 “ or motion of parts in their production; nor
 “ can reason shew how bodies, by their bulk,
 “ figure, and motion, should produce in the
 “ mind the ideas of *blue* or *yellow*, &c. The
 “ ideas we have of colours, sounds, &c. con-
 “ taining in them nothing at all of bulk, figure,
 “ or motion, we (that is the bulk of man-
 “ kind) *are not apt* to consider them as the ef-
 “ fects of the primary qualities, which ap-
 “ pear not to our senses to operate their pro-
 “ duction, and with which they have not any
 “ apparent congruity or connexion.” There-
 fore, by the testimony of Mr. Locke, it is
 not on these primary qualities, or their mo-

* B. ii. chap. viii. sec. 25.

difications, that the bulk of mankind bestow the name of colour; on the contrary, he says, that "we (the bulk of mankind) are forward to imagine, that those ideas are the *resemblances* of something really existing in the objects themselves,"* and so in fact they all think.

632. Secondly, the Doctor tells us, "the colour of a rose remains when the *appearance* changes, as it does when the rose is viewed through a pair of green spectacles; but he does not conceive that the colour of the rose is changed."†

633. I answer, that not only in appearance, but in reality, the colour of the rose is changed; for the colorific sensation of the spectacles and that of the rose are mixed, and the mixed colour alone is perceived; but the colour of the rose singly would reappear, if the spectacles were removed, and in that sense may be said not to be changed, and in no other. This the Doctor himself must allow, for he cannot pretend the sensation itself is

* Stewart on the Mind, p. 73, in 8vo.

† Reid on the Mind, p. 171.

permanent,

492. The distance traversed by a moving body, compared with the time employed in the traverse, constitutes what is called its velocity, and is evidently so much the greater, as the distance traversed is wider, and the interval of time smaller.

493. The quantity of moving particles, that is, solid and extended particles, contained in a moving body, commonly called its mass, multiplied into its velocity, constitutes the quantity of its motion.

494. *Distance* denotes the greater or lesser number of sensations of resistance, that are either perceived or conceived, between the two extremes said to be distant from each other. Space denotes also the same distance or interval, but relatively to the possible existence of intervening bodies.

495. *Motion* is said to be either relative or absolute, though in fact absolute motion is impossible. *Relative*, when the situation of a body is changed with respect to the bodies immediately contiguous to it, and apparently at rest, or at least moved with less apparent velocity in the same direction. *Absolute*, when its situation is changed with respect to more distant bodies apparently quiescent : hence a
relation

relation to other bodies is essentially included in the conception of motion; and if there were only one body in existence, it could not be moved. This I have elsewhere shewn.

496. *Rest* is a mere negation of motion, for it is unsuſceptible of degrees; whereas motion is ſuſceptible of various degrees of velocity, and of various directions, and implies a poſitive action, namely, that of the ſupreme Being, by whom alone, or through whole indulgence, by the human mind, motion can be effected, according to certain laws by him conſtituted.

497. Dr. Watſon, in his admirable treatiſe on time, ſhews, that a body in apparently inceſſant motion occupies more ſpace than when at reſt; and thus, on principles which he alone diſcovered, completely answers Zeno's Achilleum, which never before had been ſatisfactorily refuted, on rational principles.

498. *Force* is a term uſed to denote the extent of the divine agency, known by its effects or concomitant circumſtances, and is not an incomprehenſible ſhadowy being paſſing from one body into another, as ſome philoſophers have imagined.

499. Yet, as the Divine energy operates, as if something really passed from one body to another, this term is a useful compendious expression, and as such, used in various calculations of motion or resistance, &c. in various occasions.

500. We often *see* bodies strike each other with great force, while we ourselves feel nothing, because the tangible sensations are not then in our minds, but are barely *suggested* by the visible, which are their signs; or by their effects, which indicate what we should feel, if exposed to the force or agency then exerted. See N^o 405.

501. It undoubtedly sounds harsh to say, that one sensation impinges on another, or clashes with another; but this is saying no more, than that one object is perceived to strike another object also perceived. Of such opposition and clashing of the internal modifications of the mind, we have several examples; thus judgments clash with each other, when we doubt, and our volitions during the strife of passions, or the contests of judgment and passion. We advance nothing but what we conceive; whereas, the hyloists are obliged to say,

permanent, but only the cause of the sensation. Such changes are incident to other sensations also. Thus, a sweet taste and a salt taste are agreeable apart, but nauseous when mixed: a simple musical sound is agreeable, and so is it when combined with its sharp third, but shocking when joined with its sharp fourth: half a dozen drugs of a certain kind, ill scented when smelled separately, being put together, emit an agreeable smell, as Lemery experienced; the smell of each no longer remains, but is lost in the mixture.

634. Thirdly, the Doctor adds, “ we may, “ by a variety of optical experiments, change “ the appearance, figure, and magnitude, in a “ body, as well as that of colour; we may “ make one body appear to be ten; but all “ men will believe, that as a multiplying glass “ does not produce ten guineas out of one, “ nor a microscope turn a guinea into a ten- “ pound piece, so neither does coloured glass “ change the real colour of the object seen “ through it.”

635. Here the Doctor has overlooked three points worthy of his consideration: First, that

colours may be considered as sensations, and also as signs. Secondly, that objects, such as guineas, include tangible as well as visual sensations. Thirdly, that glasses may affect visual, but cannot tangible sensations; therefore they may change the visible colours, or magnitude, or figure of an object, or even multiply the same colour, figure, or magnitude, and thus present ten visible guineas, but can affect no alteration in the tangible, with which they have no relation or connexion; hence the parity entirely fails: nay even, as *signs*, the spectrums they produce are inoperative; for the power of signs arises from repeated associations with the things signified; and here there is not even a single association but with the tangible sensation of the solitary guinea. How the microscope acts has been already explained, N° 590.

636. As to what the Doctor says, “ that
 “ if a person should deny that colour, figure,
 “ motion, resistance, &c. are qualities, he
 “ would leave him to enjoy his opinion, as a
 “ person who denies first principles, and not
 “ fit to be reasoned with;” I can only say,
 that it surprises me much, as he owns he was
 once

once persuaded of the truth of the Berkeleyan doctrine; and surely he had at no time denied first principles.

637. Further the Doctor objects, that in every language there are adjectives which require a substantive to which they belong; that is, every attribute must have a subject: this he takes to be a first principle. And surely this principle may be admitted, if, as adjectives are of themselves unlimited, by *belonging* he would understand reference to something else, many indeed referring to a tangible sensation which is felt, prognosticated, or included in the subject; but meaning, as he certainly does, a subject of inherence, I think him wrong, even in the cases he adduces of *wisdom, virtue, goodness*, for they are not qualities, but mere abstract words, denoting different actions deserving approbation. Nor is he less so in attributing primary or secondary qualities to an unknown, unintelligible, useless material substance, an attribution which it were strange to erect into a first principle.

638. And as to what the Doctor presses upon us with respect to the general agreement of mankind in believing the existence

of matter, it seems to me of little weight : such agreement would equally prove the truth of polytheism, idolatry, magick, &c. from the belief and practice of which absurdities, even the Jews were difficultly restrained ; to say nothing of various physical errors generally credited. Error in speculative matters is much more natural to unreflecting man, than truth.

639. Again, the Doctor says, “ suppose I
 “ am pricked by a pin, the pain I feel is a
 “ sensation, but the pin is not a sensation, nor
 “ has it any resemblance to a sensation ; the
 “ pin has figure, thickness, length, and weight ;
 “ a sensation has none of these qualities.”

640.—*Answer.* This argument is the principal source of all the Doctor’s misconception, of this subject. To undeceive him, I would barely ask him, is the pin any thing else but its length, thickness, figure, and weight ? If it be not, how can it be said to *have* those qualities ? If it be, what is it ? He surely cannot tell. Again I would ask him, does he know any thing of the pin but what he perceives by his senses ? and is not perception by the mediation of the senses universally called a sensation ?

tion ? Does he not see the colour of the pin ? does he not feel its length, figure, and thickness, and also its point ? can he not form an idea of the pin in its absence ? and can he have an idea of that which was never perceived by the senses ? is not the word *pin* a term denoting the aggregate of these sensations ? In this sense a pin may be said to have figure, length, thickness, and sharpness, just as a house is said to have walls, doors, windows, &c. they being its component parts. A sensation, or an aggregate of sensations, considered as modifications of the mind, cannot be said to have length, thickness, or figure, (but they may be said to be perceptions thereof, see N^o 606, 607,) no more than they can be said to be coloured, when colours are perceived. The Doctor must allow, that when, in the absence of the pin, he forms an idea of it, or a conception as he chuses to call it, his idea represents to him the figure, length, and breadth, of the pin ; yet he will not say, that his idea or conception has any length, thickness, or figure.

641. Professor Stewart* owns, that “ it is

• P. 3.

“ not

“ not matter which we perceive by our senses,
 “ but only extension, colour, figure, and cer-
 “ tain other qualities, which the constitu-
 “ tion of our nature leads us to refer to some-
 “ thing which is extended, figured, and co-
 “ loured : the case, he says, is precisely the
 “ same with respect to mind ; we are not
 “ conscious of its existence, but we are con-
 “ scious of sensation, thought, and volition ;
 “ operations which imply the existence of
 “ something which feels, thinks, and wills.”

642. Here I must beg leave to differ from
 this excellent metaphysician : the constitu-
 tion of our nature cannot force us to believe
 that any thing is extended, figured, or co-
 loured, but what we feel and see, though
 the construction of language often compels us
 to speak of these sensations as if they were
 qualities of something else : this was ex-
 plained, N^o 541. There are neither substan-
 tives nor adjectives in our perceptions ; these
 are mere creatures of language. Now lan-
 guage has given birth to the most monstrous
 delusions ; it seduced the scholastics to think
 that some distinct reality corresponded even to
 the most abstract terms ; hence *relations* were
 thought

thought to be realities distinct from correlated things ; hence *nature* was thought to be a real thing, distinct from the persons to which it was attributed, and at last erected into a goddess ; hence *equinity*, *hecceity*, *petreity*, were believed to have corresponding entities ; and many other quiddities which I pass over. Matter, as somewhat distinct from our perceptions, is just such another absurdity ; nay more intolerable, as it supposes the union of things incompatible, namely, sensations and an insentient substance ; for extension and figure have been proved to be sensations, and colour is allowed to be a sensation ; for what Dr. Reid calls colour, he allows to be totally unlike any that was ever seen ; see N^o 629. If the constitution of our nature forced us to believe the existence of matter, surely neither Descartes nor Malbranche would have thought revelation necessary to induce us to believe the existence of bodies, and certainly they were not sceptics.

643. As to the parity which the learned professor institutes betwixt belief in the existence of mind, and the existence of matter, it is far from being just. The existence of mind
is

is demonstrated by our consciousness of the identity of the principle of its various perceptions and operations ; see N° 372 ; and hence none but Mr. Hume pretended to entertain even a speculative doubt of it ; but of the existence of matter, no proof has ever been given ; on the contrary, it has been refuted and shewn by Berkeley to be impossible, in whatever sense it can be taken, whether as cause, instrument, or occasion, and absolutely denied by other philosophers of note, or at most believed as an article of faith. The professor even owns, that the evidence of the existence of mind is stronger than that for the existence of matter ; for the former, he says, is suggested by the subjects of our consciousness, and the latter by the objects of our perceptions. The case is then not precisely the same, but far different ; for this fictitious object of our perceptions was never perceived, but is merely an inference suggested by our prejudices. How then the learned professor could style the sentiments of Berkeley *reveries*, I cannot well imagine : that he was biased by his partiality to Dr. Reid is evident ; however,

ever,

ever, the Doctor never used so harsh an expression.

644. That the conclusions of Berkeley are by no means sceptical, is so evident, that Dr. Reid allows the fact; but I think the principles of the Doctor, as exposed and concentrated by the learned professor, lead directly to the most dreary scepticism; for the professor* tells us, “ that the mind is so formed, “ that certain impressions produced on our “ organs of sense, by external objects, are “ followed by corresponding sensations; and “ that these sensations, which have no more “ resemblance to the qualities of matter, than “ the words of a language have to the things “ signified, are followed by a perception of “ the qualities of the body, by which the im- “ pressions had been made. That all the steps “ of this process are equally incomprehensible, “ and that, for any thing we can prove to the “ contrary, the connexion between the sen- “ sation and the perception, as well as be- “ tween the impression and the sensation, “ may be both arbitrary.” Now if the con-

* Sewart on the Mind, p. 92.

nexion between sensations and perceptions be arbitrary, we may have sensations without perceptions; that is to say, we may have the sensation of seeing, and yet perceive nothing; that is, we may see, and yet see nothing; we may see a colour, or what Dr. Reid calls the *appearance* of a colour, and yet not perceive it; we may have the sensation of feeling, and yet perceive nothing. This indeed is *incomprehensible*; if this be so, our whole life may be a dream, wherein we imagine we perceive things, and yet perceive nothing. Such is the consequence of distinguishing sensation from perception. Perception may be indeed without sensation, as in God and angels, but sensation cannot be without perception, for they are identified, they being the same thing differently considered; sensation being knowledge gained through the mediation of the senses, and perception being knowledge abstractedly considered. Let it also be remarked, that the general incomprehensibility of all things was the distinguishing tenet of the ancient sceptics. Now what can be comprehended, if we may doubt of the connexion betwixt sensation and perception, or rather that
the

the former includes the latter ? Yet the professor adds, “ it is just as difficult to explain
 “ how” our perceptions are gained by the
 “ means of sensations, as it would be upon
 “ the supposition that the mind were all at
 “ once inspired with them.” It would indeed be much more difficult, if the latter were distinct from the former ; for a thing is sufficiently explained if its cause be assigned ; in case of inspiration, God would be the immediate cause of our perceptions ; whereas of a *nonentity*, such as a sensation without a perception, no cause can be assigned.

645. Lastly, the Doctor, after allowing that every thing relating to ourselves would equally subsist in the Berkeleian hypothesis (as he calls it), as in that commonly received, and that the existence of the Supreme Being would be placed in a still stronger light than in the common ;* yet still he thinks, “ it
 “ takes away all the evidence we have of
 “ other intelligent beings like ourselves ;
 “ what I call a father, a brother, or a friend,
 “ is only a parcel of ideas in my own mind,
 “ and being ideas in my mind, they cannot

* 1 Reid, 252, 253. On the Mind, 107. Encyclop. Britt. 544. 547. 549.

“ possibly have that relation to another mind,
 “ which they have to mine, any more than
 “ the pain felt by me, can be the individual
 “ pain felt by another. I can find no principle
 “ in Berkeley’s system which affords me even
 “ a probable ground to conclude, that there
 “ are other intelligent beings like myself, in
 “ the relations of father, brother, friend, &c.
 “ I am left alone in the universe, &c.”

646. To this I answer, that the Bishop has
 not overlooked this objection; he adverts to
 it in his Third Dialogue; he there tells us,
 “ it is granted we have neither an *immediate*
 “ *evidence* (such as we have of our own per-
 “ ceptions,) nor a *demonstrative knowledge*
 “ (such as we have of the existence of God)
 “ of the existence of other finite spirits; but
 “ it will not thence follow, that such spirits
 “ are on a foot with material substances;
 “ if to suppose the one be inconsistent,
 “ and if it be not inconsistent to sup-
 “ pose the other; if the one can be inferred
 “ by no argument, and there is a probability
 “ of the other; if we see signs and effects
 “ indicating finite agents like ourselves, and
 “ see no sign or symptom whatsoever that
 “ leads to a rational belief of matter; I say, I
 have

“ have a *notion* of spirit, though I have not,
 “ strictly speaking, an *idea* of it, but know it
 “ by reflexion, &c.” Now by reflexion, I
 presume, the Doctor might find, that he has
 no knowledge by sensation or perception of
 the minds of other intelligent beings like
 himself, but that he collects his knowledge of
 them from their actions and effects, anala-
 gous very nearly to his own, in similar cir-
 cumstances, and every other sign of their
 existence; he has therefore not indeed a me-
 taphysical, but the highest moral and physical
 certainty of their existence; he has no other
 of the viscera of those he converses with; he
 neither sees nor perceives their interior; does
 he therefore doubt of the existence of those
 parts? Secondly, as to the *bodies* of his father,
 brother, friend, &c. he certainly knows them
 immediately only by his own sensations; and
 surely the Doctor must allow this, so far as
 regards their colour, voice, language, and other
 secondary qualities, as they are called. By
 testimony he becomes acquainted with the
 foundation of the relation in which he stands
 to each of them; he can know it no other-
 wise in the Doctor’s hypothesis. And as to

what are called the *primary qualities*, as extension and figure, he not only knows them in his own perceptions, but from their constancy and uniformity in his own mind, and the similarity of his own mind to the minds of other individuals; he infers that sensations, such as those that constitute his own body, constitute also the bodies of those individuals: this judgment being formed in his earliest infancy, and incessantly repeated, becomes so habitual, that its consciousness is instantaneously forgotten, as is the consciousness of the necessary disposition of the tongue or lips for the pronunciation of words, though at first gradually learned.

647. I shall here conclude this important inquiry with some just reflections made by Dr. Reid himself,* leaving their application to the unprejudiced reader. “The world
 “has been so long befooled by hypothesis in
 “all parts of philosophy, that it is of the utmost
 “consequence to every man, who would
 “make any progress in real knowledge, to
 “treat them with just contempt, as the
 “series of vain and fanciful men, &c.”

* 1 Reid, 78, 79.

And again, " the first rule laid down by the great Newton is this; ' no more causes of natural events ought to be admitted, but such as are both true, and are sufficient for explaining their appearances." Now matter is avowedly not sufficient to explain the origin either of sensations or of any other perception; for, even admitting it, all is still incomprehensible, and the Divine agency must still be called in, and is the only sufficient cause of all these events; therefore the interference of matter is totally superfluous.

APPENDIX TO CHAP. II.

So many new observations, equally solid and ingenious, occur in Dr. Reid's writings, and his authority stands so deservedly high in Great Britain, that I cannot totally dismiss this subject without examining the principles that unfortunately seduced him to abandon the antihyloistic system, which he had once embraced. He was not then sufficiently unprejudiced; but, filled with just abhorrence of the impious principles of Hume, he thought he could not fly to too great a distance from them.

them. The Berkleyan doctrine he precipitately conceived to have been their foundation. I shall confine myself therefore to such remarks as immediately relate to his opposition to it.

648. Berkeley having founded his doctrine on the three following propositions ;

First, that what philosophers then called primary qualities of bodies, namely extension, solidity, figure, and motion, stood exactly on the same footing as those qualities which they called secondary, namely colours, sounds, heat, cold, &c. ; and as these were admitted to be mere sensations, and consequently could not exist but in a mind or sentient substance ; so neither could the so called primary qualities.

649. Secondly, that all sensations were impressed upon us *ab extra* ; and as matter, even if such a thing existed, as it is commonly said to be, cannot act upon mind, therefore these sensations must be impressed immediately by the Supreme Being, or, which amounts to the same thing, in conformity to certain laws of which he alone is the author and

and alone executes ; no other being possessing that power,

650. Thirdly, that we have notions of many things, for instance, of God and of the human mind ; the import of abstract terms, &c.; though we can have no idea of them, as *ideas*, properly so called, are mere faint copies of sensations; and it is certain we can have no sensation either of God or of the human mind.

651. In opposition to the first principle, Dr. Reid denies that primary and secondary qualities stand on the same ground ; First, “ because our senses give us a direct and distinct notion of primary qualities, but of the secondary they give us but only a relative and obscure notion.” I think they furnish us with a clear and distinct knowledge of both, for what can be clearer than our knowledge or perception of colours, sounds, tastes, smells, &c. ; inasmuch, that the very epithet *clear* is borrowed from the extreme perfection of visual perception ; for by *clear* I mean what Locke calls a clear idea, namely, a full and evident perception.* And Condillac says,

* B. ii. C. xxix, sec. 4.

*quoi de plus clair que les perceptions de son, & des couleurs quoi de plus distinct ?** And Leibnitz holds the same language.† So that the Doctor must have annexed some other signification to the word *clear* of which I am ignorant. It is true that the so called secondary qualities are incapable of definition, but that arises from their being so clear, that no definition can make them clearer. The Doctor says, our senses afford us only a relative notion of them ; I suppose he means, a relation to tangible objects ; but this relation arises not from their nature, but from a long and early association ; and hence Cheselden's patient discovered no such relation at first. Many tastes, sounds, and smells have no such relation. The primary qualities seldom have any such relation, as they themselves, being the most important, are the things signified ; yet sometimes they have, for the sight or feeling of a pear or of an egg will often suggest their respective tastes, but this does not prevent them from being in their own nature absolute.

* *Connoiss. Hum. C. ii. sec. 11.*
 † *Nouv. Essais, p. 213.*

652. Secondly, the Doctor says, " there
 " are no disputes about the nature of primary
 " qualities, no different opinions of the na-
 " ture of extension, figure, or motion; where-
 " as the nature of secondary qualities not
 " being obvious to sense may be a subject of
 " dispute." The Doctor surely did not re-
 collect that various opinions were held of the
 nature of extension; that some thought it ne-
 cessarily solid, and even boundless; that others
 thought mere extension uncreated, and an at-
 tribute of the Divinity; that Locke derided
 the usual definition of extension, B. ii. C. xiii.
 sec. 15, and thought it (extension) as incom-
 prehensible as any thing belonging to the
 mind. B. ii. C. xxiii. sec. 26. Leibnitz
 thought extension to be a mere phænomenon;
 some think it infinitely divisible, others not.
 In the same manner various definitions
 have been given of motion, which may be
 seen in Lock . iii. C. iv. sec. 8, 9; and
 Chambers, art. *Motion*. On the contrary,
 the nature of secondary qualities admits of no
 dispute; it is only the disposition or kind of
 tangible things, which are deemed their occa-
 sional causes, that admits of any; for what
 2 4 dispute

dispute can arise concerning the nature of *red* or *sweet*, hot or cold? though the occasional causes of them may be variously explained.

653. When Berkeley, said, that primary and secondary qualities stood on the same footing, he meant no more than that they were equally sensations; that is, were known by the mediation of the senses, which cannot be denied. Whether disputes arose concerning their nature or not, is of no consequence, but totally foreign to his argument.

654. In opposition to the second principle the Doctor affirms, that "all the operations of the mind, or modes of thinking, are *active*, and in all ages and languages are expressed by verbs of an active signification," 1 Reid, 23, 24; such as seeing, hearing, &c. It seems, therefore, to have been the natural judgment of mankind, that the mind is active in its various ways of thinking; and, p. 103, he says, "there is no operation of the understanding, in which the mind is not in *some degree* active; and hence mankind have expressed these operations by active verbs." The fact, however, does not exactly correspond with this observation; for if the Latins say *video*, they also say *intueor*;

intueor ; if they say *dono*, they also say *largior* ; if the Greeks say *σιδω* ; they also say *ὀπτομαι*. So these modes have no connexion with the active or passive states of the mind. Moreover, *video* is equivalent to *sum vident*, and all active verbs may be, and are by logicians so considered. Hence, probably, the Doctor, p. 276, says, he disputes not whether sensation may be called an operation or a feeling. Now if we are not ourselves the operators of our sensations, and if matter cannot act on spirit, is it not evident, that our sensations are impressed upon us by the Author of our being ? Or in other words, that we receive them solely from him ? Impression is merely a metaphorical expression, denoting no more than we are not ourselves the efficient cause of their existence. The Doctor justly defines an impression to be a change produced in some passive subject, by the operation of an external cause. We are indeed active in our attention to them, in many cases, attention often proceeding from the will ; and also in taking the necessary steps to procure them, as we may in various instances.

655. The third principle the Doctor both misunderstands and misapplies : he misunderstands

stands it, in confounding notions with ideas, which Berkeley called ideas of imagination, in contradistinction to sensations, which he unfortunately called ideas of sense. The Doctor tells us, 1 Reid, 271, that "it is one
 " thing to say I have the sensation of pain,
 " and another to say I have a notion of pain.
 " The last expression signifies no more than
 " that I understand what is meant by the
 " word *pain*; the first that I really feel pain:
 " but I can find no distinction betwixt the
 " notion of pain and the imagination of it;" or, indeed, between the notion of any thing else and the imagination of it. Here it is plain he misapprehends Berkeley's application of the word *notion*. That great metaphysician never denotes by it things of which we can have an idea, but solely things of which we can have no idea, as God and the human soul, which we know to exist, though we can form no idea of them, as they are not objects of sense, of which alone ideas can be had: and to the knowledge of the signification of signs, and of abstract or complicative words, see Chap. I. Consequently the bishop would never say a *notion of pain*, but only an idea of pain, or a knowledge of
 pain,

pain, if treating of the knowledge which God has of it, who is incapable of feeling it. Surely the Doctor may say he has a notion of God or of the human soul, though he cannot say that he imagines them, or can form an imagination of them.

656. Again the Doctor misapplies this word, when he says, p. 264, that if consciousness and reflexion furnish us with notions of spirits, may not our senses furnish us with notions of bodies and their attributes? No; our senses furnish us with sensations, and it is the aggregate of these we call *bodies*; they furnish us with nothing else; but the Doctor, by *bodies* means matter, and of this certainly we can have neither notion nor idea, see N^o 569. The Doctor, p. 265, says he perceives matter *objectively*, that is, something that is extended and solid; yet we know nothing either of extension or solidity, but merely the sensations so-called; and that these sensations must have an external cause, and that matter as above defined, cannot be that cause, as it cannot act on spirit, and is in itself impossible.

657. To Dr. Reid it seems strange, that a pious and learned Bishop should advance an
 opinion

opinion so contrary to nature and to common sense as that of the non-existence of matter. And doubtless the cotemporaries of Copernicus thought his system ridiculous, and contrary to common sense. To the Bishop, were he living, it would seem at least equally strange, that so pious and excellent a man as Dr. Reid should take such pains to uphold the existence of a substance grounded merely on vulgar prejudices, and which was in all ages, and still is, the strong-hold of atheists and materialists. It is said, that Dr. Clarke refused to undertake refuting it. General Biography, art. *Berkeley*.

CHAPTER III.

SECT. I.

OF IDEAS.

658. Ideas have commonly been understood in a sense too vague and unlimited. Locke, B. ii. C. viii. sec. 7, bestows this name on whatever is the object of perception, thought, or understanding. This is certainly the popular sense of the word, but philosophers, more attentive to precision, as Berkeley, Hume, and Watson,

Watson, have confined the signification of ideas to the representation of images, or copies of past sensations, and of sensations only. Thus, when we think of or recollect the different parts of a house which we have seen, and can mentally perceive its various apartments, stairs, windows, &c. we may be said to have an idea of it. So we have an idea of a song which we heard and recollect. But such mental representations are much more feeble, unsteady, indistinct, and defective, than the original sensations of which they are the copies; and commonly so much the more feeble, as more time has intervened betwixt them and the original sensation.

659. The ideas of the objects of sight are by far the most lively; those of sound approach them most in point of vigour: those of smell and taste are far weaker, and less durable: those of touch are still more feeble, unless recent; after some time they fade away.

660. In receiving ideas, the mind is passive, as it is in receiving sensations; but as we can occasion many sensations by removing the obstacles to their reception, by acts of our will, (for

(for instance, we can see objects by opening our eyelids,) so we can excite ideas in our minds by attention to the thoughts of objects associated with them, either naturally or artificially by signs, as will be seen in the sequel.

661. Some have censured Berkeley for calling ideas copies of sensations, as he elsewhere asserted, that nothing resembled a sensation but another sensation : but it is evident the bishop meant no more, than that nothing fully resembled a sensation but another sensation, just as though nothing is in all respects like a man but another man ; yet one may say, that a good picture of any man resembles that man.

662. Ideas are either simple, complex, or compound.

662.^b *Simple* ideas are those which represent or repeat to us the simple sensation we already experienced, as the ideas of sounds, smells, tastes, heat, cold, extension, solidity, &c.

663. *Complex* ideas are those that represent two or more perceptions of the same sense, as colour and extension, by the sight, or two or more sensations received by different senses, but indissolubly associated, and as it were consolidated,

solidated, by long and uninterrupted union. Such as the ideas of colours, which are always connected with that of tangible extension, on which they appear to be spread; and sometimes with the ideas of extension, solidity, and heat; such is the idea of a red-hot iron; or that of ice, in which the ideas of cold, extension, and solidity, and sometimes of colour, are connected. In tastes also the ideas both of flavour and extension are connected.

664. *Compound* ideas are those which represent various aggregates connected and denoted by one name, each of which, and also their connexion and aggregation, had previously been perceived by sense; such as houses, ships, herds, flocks, armies, or other assemblies, &c.

665. Ideas are also either original or *f*ac-
titious.

666. *Original* ideas are those that repeat, without any intentional variation, the sensations they represent, and in the same connexion, order, and manner; and hence those sensations are said to be *remembered* or again brought back to the mind; but the faculty of memory extends much further than to sensations,

tions, for we remember notions, judgments, volitions, &c. as well as sensations by means of their signs.

667. *Facilitious ideas*, commonly called ideas of imagination, are those which we form by addition or subtraction of things, whose parts have been previously perceived by sense, but whose aggregate had never been perceived. So we may form an idea of a golden mountain, though we never saw such a mountain; but we have had sensations both of gold and of elevations; or we may form an idea of a man far above or below the usual stature, or of a centaur, &c. :—or which we *acquire* by signs, such as words or writing; thus we acquire ideas of persons or events, countries, cities, palaces, &c. which we have never seen, either by the relation of others or by reading.*

668. Hence *facilitious ideas* are either *native*, arising in the mind in consequence of an act of the will, or *adventitious*, being acquired by communication.

669. *Original ideas* are commonly at first much stronger than the *facilitious*, but they gradually fade away, and in some minds sooner than in others; their disappearance is

* See Edgeworth on Education, Vol. iii. p. 129. in 8vo.

at first partial but at last total. They are known to be original, either by their superior vivacity or by their association and connexion with the chain of preceding, concomitant, or subsequent circumstances. This is the strongest proof. Thus I remember being at school, and know this idea to be original and not factitious, from its unconstrained connexion with the idea of the place where I lived, the books I read, the master who taught me, and many of my school companions, &c. When original ideas have faded away to a certain degree, and are weakly associated with the ideas of other circumstances, they are not easily or perhaps at all distinguishable from factitious ideas.

670. *Factitious* ideas may also be remembered; but as the sensations they represent form no link in the series of real things witnessed by the mind that formed or received them, their origin can scarcely be mistaken.

671. Both original and factitious ideas excite emotions, but the original much more strongly. Thus the memory of a tragic event which I have seen, inspires me with more terror or compassion than could be excited by the bare imagination of such a scene: fictions

which we ourselves form, affect us less than those which we learn from others, because we are *conscious* of the falsehood of the former; whereas, those communicated to us by others, are only *believed* to be false.

672. Factitious ideas are so much the more vigorous, and the emotions they occasion so much the livelier; as they are more completely accompanied with sensible circumstances, suited to them, and the previous disposition of our mind to analogous feelings. Thus theatrical representations make the strongest impressions when not only the voice and gesture, but also the age, garb, language, are such as suit our conceptions of the original personages. Hence also the effect of thecons, martial pictures exhibited after martial music.*

673. Even signs, long associated with ideas or notions, such as the words, whether written or spoken, of a language perfectly familiar to us, affect us in the same manner as the ideas they denote, though unaccompanied with any idea.†

* 3 Edgeworth, 162.

† See my treatise on Logick, Vol. I. N° 34.

SECT. II.

OF THE PROPERTIES OF SENSATIONS, IDEAS, AND NOTIONS.

674. These are, truth or falsehood, clearness or obscurity, distinctness or indistinction or confusion, adequacy or inadequacy.

¶ I. *Of Sensations, their Truth.*

675. If a sensation be deemed true, when it is such as it should be, according to the laws of nature in the given circumstances, then all sensations are true, even those of dreamers and madmen; but if we consider such sensations only as true as are conformable to the usual regular course of nature, then those only can be so regarded as are consistent therewith. But among these a further distinction must be taken; for some of them terminate in themselves, and others by an early natural association bear a reference to other sensations. To the truth of the former sort nothing more is requisite than conformity with the usual course of nature; thus, in the

healthy state of the organs, all odours, tastes, and tangible sensations are *true*; but those of the latter sort, being signs of other sensations, must not only agree with the usual regular course of nature in the given circumstances, but also denote, with more or less exactness, the state of the sensations of which they are the signs; for if they denote this state, otherwise than the primitive association had constantly suggested, they must in that respect be regarded as false.

676. Thus visual sensations being signs of the figure, distance, magnitude, and motion of tangible sensations, the visual sensation of an oar obliquely immersed in water, denoting its tangible sensation to be crooked, when in reality it is straight, is false, though conformable to the laws of optics; for it tacitly suggests a falsehood, as plainly as words can expressly do, and is not grounded on a constant, usual, and universal association.

677. But a visual sensation suggesting the shape or magnitude of a tactile sensation, so as at the same time to denote its distance, agreeably to their original and usual association, as well as to the laws of optics, cannot be deemed

deemed false, though that shape or magnitude be not as exactly suggested as it might be at another distance.

678. Hence the vision, at a considerable distance, of a square tower, without marking the angles, and consequently apparently round, is not false, for it is such as it should be, not only according to the laws of optics, but also to the original association of visual and tactile sensations at such distances, which distance the confused visual perception thus suggests.

679. And for the same reason the visual indications of the magnitudes of the sun and moon are not false, though inexact; but a judgment that their real and apparent magnitudes would be the same at a nearer distance would be inconsistent with the results of experienced associations, and therefore false.

680. A sensation common to different aggregates cannot be deemed false, merely because it does not suggest to which of them it belongs, though a judgment founded solely upon it would certainly be rash, and probably false. Thus the sensation of a brilliant yellow colour being equally contained in the

aggregate called *gold*, in that called *pinchbeck*, and in that called *mica*, it cannot be deemed false, for not deciding to which of them it belongs.

681. Colorific sensations varying with the distance of the tangible objects to which they belong, though conformable to the laws of optics, may be deemed false, as the colours of tangible objects are usually permanent.

682. Sensations suggesting tangible objects to exist where they do not exist, though agreeable to the laws of optics or acoustics, are false and delusive. So those presented by a mirror suggesting tangible objects behind it, are false. And the same may be said of various other optical appearances.

2. *Clearness.*

683. *Clearness*, is a mode of perception literally applicable only to the sensations of light and colours.

684. *Light* is said to be clear, when it is sufficient for an accurate perception of colours. And colours are said to be clearly perceived when their various shades are perceived.

685.

685. Light is susceptible of various degrees of clearness. Thus the light of the meridian sun is generally clearer than that perceived at its rise or setting, and both are clearer than that of the moon. And hence a clear light is justly called a *strong* light, and light of inferior degrees of clearness is called a *weak* light. But the difference of the degrees of clearness can only be perceived by comparison. In no case can light be properly said to be *obscure*, for that is a contradiction; what is so called is properly a *weak* light.

686. Colours participate of the clearness of the light in which they are seen. But as *black* is an obscure colour, in whatever light it is seen, with which they are frequently mixed, or to which the shades or mixtures of primitive colours frequently approach, they may in such cases be obscure, independently of the weakness of the light in which they are seen. Colours seen by a weak light should rather be said to be weakly perceived, than obscurely seen or perceived.

687. Colours of distant objects are more or less clearly perceived, in proportion to the proximity, distance, size, or minuteness of those
 A A 4 object.

objects. But when brilliant they may, though extremely distant or minute, be clearly perceived.

688. Sounds are also said to be clear when free from shrillness, harshness, and hoarseness.

689. Clearness is seldom attributed to odours, tastes, or tactile sensations, though their existence be certain. All sensations may be called obscure when attention to them is prevented by that given to stronger sensations, or even to ideas.

3. *Distinctness.*

690. Sensations are *distinct* when their gradations and peculiar characters are perceived and noticed: thus colours are distinctly perceived, when not only their different sensations, as red, green, &c. but also the various shades of the same colour, are noticed, or the different degrees of sweetness of sugar, honey, manna, &c. The sensations of figures, whether visible or tangible, are distinct, when the number of their sides, angles, and curvatures, is known by simultaneous perceptions; for if they be so numerous, that their number cannot be distinguished at once, the sensation of
the

the figure is indistinct, and the knowledge acquired by successive numeration should rather be called a notion. Such is the knowledge we may have of a chiliagon, which cannot be distinguished by mere sight from a figure of 900 sides.

691. Sensations are capable of various degrees of distinction. In the least and lowest degree are those which exhibit only the most general of the properties of which an aggregate consists; those that present the less general are more distinct, and those that present the individual properties are the most exact, precise, and distinct. Thus if I see upon land a white colour at a distance, I immediately associate it with extension, and call it a white object; but whether it be a white stone or a white animal I cannot distinguish, as whiteness is common to both; and in this respect the sensation is indistinct, vague, and indeterminate, though sufficiently distinct from red, green, or other coloured objects. On approaching nearer, I perceive the distinguishing characters of an animal, but not those of the species of animal; on approaching still nearer, I perceive it to be a sheep, consequently
my

my sensation is more distinct; but it is capable of becoming still more distinct and determinate, for a shepherd might point out the peculiar characters of that particular sheep.

692. An assemblage of sensations is said to be confused, when they are irregularly intermixed or jumbled together, as the colours on a painter's board, and various tastes and smells.

693. Thus a sensation is clear when we have no doubt of its perception, but it is distinct and determinate only when we notice its discriminating characters. See ante, N° 385.

¶ 11. *Of Ideas ; and, first, of their Truth.*

694. As all ideas are copies of sensations, their *truth* cannot consist in that single character, otherwise all would be true, which is absurd; for if so, the factitious anthropomorphic idea of God should be deemed true: a true idea then is that which represents exactly that peculiar object whose name it bears, and which is consequently supposed to be that whose representation is intended. Hence a picture would be called false if it bore the
name

name of Charles the First, but resembled Oliver Cromwell.

2. *Clearness.*

695. The clearness of an idea consists in its more or less resemblance to the sensation or aggregate of sensations of which it is the copy, and it is said to be *obscure* when it fails to represent some important feature of its original; thus I have a clear idea of a man whom I have seen, when I recollect his size, corpulence, and the features of his face; but my idea of him is obscure when I recollect only one or two of these particulars: hence there are various degrees of obscurity.

696. Factitious ideas are seldom so clear as original ideas, except in consequence of some disorder.

3. *Distinctness.*

697. Ideas are *distinct* when they so exactly copy the sensations they represent, that they may be distinguished from the idea of any other sensation. Hence, distinctness of an idea consists in the utmost degree of clearness with

with which it expresses the sensation it copies; and consequently it may be distinct, though the sensation it represents be indistinct; but it must be indeterminate, when the sensation it copies is indeterminate.

4. *Adequacy.*

698. An adequate idea, is that which exhibits such a number of the characters of an aggregate, as is sufficient for the deduction of certain of its unperceived properties, by reflecting on their relations to each other; thus, the idea of a right-angled triangle, is sufficient for the detection of its properties. So the compound idea of the external character of a mineral, is adequate, or sufficient, to the discovery of the properties commonly connected with those characters, and thus its class, genus, and species, and consequently the name it should bear, and to which the knowledge of many of its properties is annexed, is determined.

5. *Positive.*

699. Since all sensations are *positive*, being modifications that exist or have existed, so all
ideas

ideas being copies of such sensations, or aggregates, must be positive, and none can be negative. The idea of a shadow is not a negative idea, but rather the idea of a circumscribing illumined space, suggesting the distance of its parts from each other without any perception of an intervening colour. Perfect blackness cannot be otherwise perceived. Darkness cannot properly be said to be perceived ; it is rather a want of the perception of light, whose presence is denied, because it is not perceived. Hence such words denoting negative judgments, signify notions rather than ideas.

6. *Possible.*

700. Neither can we have any idea but of things possible, for as things impossible exclude each other, a sensation of them cannot be had ; for instance of a square circle, or of a being that is both a man and a horse. It has been said, that since we deny the possibility of such things, we must conceive them, otherwise we should deny what we are ignorant of ; but this is a mistake ; we indeed conceive or have an idea of each thing separately, for so considered they are possible, but
we

we deny their union, because we discern their incompatibility. Yet the mind may perceive at the same time sensations repugnant to each other, as already said, N° 389, when they affect different combinations of that aggregate of sensations which constitutes the human body.

¶ III. *Notion.*

Truth.

701. A *true* notion, is that which reason, moral instinct, and the received signification of the word to which it is annexed, demands: this last standard however is not always just; it is so only when not contrary to the two first. Thus the true notion of *religion* being, that it is a system of true tenets, and of practices most agreeable to the Supreme Being, the notion annexed to that word by heathens was false, as they supposed it, to consist merely in sacrifices, festivals, and ceremonies, and admitted a plurality of objects of worship.

Clearness.

702. Notions are *clear* when a true and intelligible definition of them can be assigned, even though in many cases incomplete: thus

we may have a clear notion of the Supreme Being, though we are ignorant of his essence and of many of his properties and attributes; such also is our notion of the human soul, though we are unacquainted with its essence, and many of its properties: so also we may have a clear notion of a triangle, without knowing whether it be an equilateral, an isosceles, or a scalenum, for we can define it: so also we may have a clear notion of an animal or of a metal without discriminating any: so also we may clearly understand what is meant by complex notions, such as *government*, *religion*, &c. without thinking of any in particular.

Distinctness.

703. A distinct notion differs from a clear notion only in being more determinate and precise, marking the peculiar circumstances by which a notion differs from other notions that border upon it; as that of avarice from that of frugality, of liberality from prodigality, religion from superstition, liberty from licentiousness, murder from manslaughter, &c.: we may have a distinct notion of a large number,

ber,

ber, as 100,000, though not a distinct idea even of 20, but only know it by numeration, because we have an idea of the decimal places which indicate those high numbers.

Adequacy.

704. An *adequate* notion is such a knowledge of a subject as enables us to judge of its truth or falsehood, of its propriety or impropriety. Thus our notion of human justice is sufficiently clear to enable us to decide how far an action, whose circumstances are known agrees or disagrees with it. But our knowledge of a fact may be so imperfect, that its known proofs or circumstances may be inadequate to the establishment of any certain decision respecting it.

But our notion of Divine Providence is not sufficient to enable us to discern its wisdom and justice in many cases which it either ordains or permits ; as the grounds on which it acts, and the views which it proposes, (frequently very distant, but which the Divine power can realize,) are necessarily unknown to us ; though we are certain, *a priori*, of the suitableness of all such events to the occasion,
and

and of their exact conformity to the rules of justice.

Absolute, Relative, Positive, Negative.

705. *Absolute* notions are those which we have of things *directly* understood, without any reference to any thing else : such as our notions of intelligence and knowledge, love and hatred, such as they exist among men.

706. *Relative* notions are such as we have of things not directly, but by their relation to something else which is directly known : thus the above-mentioned properties, when ascribed to the Divinity, are understood only by their analogy to the sense they bear when ascribed to human beings ; which analogy consists in the general similitude of their effects, and not in their modes of existence.

707. All absolute notions are *positive*, as they concern things either existing, or at least possible.

708. But of relative notions, some are *negative*, as they include a denial of something positive ; such as *darkness*, the denial or absence of light ; *ignorance*, the denial of know-
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ledge; *immensity*, a magnitude to which bounds are denied, &c. In the two last cases a subject is referred to, to which something is denied; as knowledge, to a being capable of possessing it, bounds to magnitude, and many others; these are called *privative* notions. The word *nothing* denotes denial of all beings; but as two negatives are equivalent to an affirmative, when we say *nothing is impossible to God*, the meaning is *all things are possible to God*. So if we say *darkness is inconvenient*, this is equivalent to say *light is convenient*. But such conversions are not absolutely necessary; for such privations may be considered as states, and such states may be considered as inconvenient, &c.

Impossible.

709. We have a notion of impossibility in this sense, that we know the signification of that word, but we cannot have a notion of things *known* to be impossible, for such things are unintelligible, involving a contradiction; yet we may understand the separate words or separate branches of a proposition that convey
that

that impossible sense; that is, the subject and attribute; because such a proposition either affirms the union of things that exclude or contradict each other, or the disunion of things that cannot be separated; as their separation would involve a contradiction, or at least be unintelligible. But this impossibility is discerned, otherwise it could not be affirmed, and in this sense also we may be said to have a notion of it.

710. One may also have a notion of an object *really* impossible, when its impossibility is not discerned, and consequently not apparent to the person who entertains it. This often happens in complex and complicative notions, when one of the notions that enters into the complexity is false; as the notion of a *cruel God*, entertained by the Manicheans; of a *corporeal God*, held by the Anthropomorphites: the notion of God entertained by both was false, and hence they did not discern the incompatibility of those attributes. Such also is the notion of extended solid matter, held by the hyolists; and of a material soul, held by the materialists; to say nothing of other false

false tenets, supposed to be grounded on revelation.

Comprehensive.

711. A comprehensive notion is a knowledge of all the properties of an object.

CHAPTER IV.

SECT. I.

ABSTRACTION.

712. Metaphysical abstraction, is the mental separation from each other, of things which cannot exist but in a state of union; or of those states, modes, qualities, or properties, which, being equally observable in many distinct or different objects, and therefore said to be common to them, from all those objects in which they are observed, or to which they are ascribed; or of objects capable of many varieties, from all of those varieties, retaining only what is common to them all.

713. Thus, when we see an object extended, coloured, and moved, it is plain that
neither

neither colour nor motion can exist separately from extension. And, secondly, if two or more objects are perceived to resemble each other in colour, magnitude, or other properties, which are therefore said to be common to them ; or, in other words, of which they are said to participate, it is evident that none of these properties can exist separately from all the objects to which they are common.

714. Thirdly, though extension be susceptible of indefinite variety, both in length, depth, and breadth, yet it cannot exist but under some or other of those modifications, and not independently of all of them. The same may be said of figure, colour, and motion, as their respective varieties.

715. Now as the existence of all sensible objects consists in their being perceived by sense, it is plain that such of them as cannot exist separately from each other, cannot be perceived by sense separately from each other ; or, in other words, do not admit of separate sensations ; consequently, since ideas are copies of sensations, neither can separate, that is abstract, ideas of such bodies exist.

716. Therefore, we can have no idea of

colour abstracted from extension, on which it seems to be spread ; nor of a colour or magnitude, &c. common to different objects, abstracted from all those objects ; nor of colour, figure, or magnitude in general, abstracted from and excluding all their respective varieties : thus we cannot have an idea of a colour that is neither red, white, yellow, &c. or some shade or mixture of these ; nor of a triangle, which has no precise proportion of sides or angles, being neither right-angled, isosceles, or scalenum.

717. Yet an idea may be *indeterminate*, because the idea it copies may be indeterminate, see N° 691. and 697. Neither the idea nor the sensation are abstract ; they are imperfect and defective, but not exclusive.

718. Thus abstract ideas are impossible in every case.

719. But though we cannot have abstract ideas, yet we may have *abstract notions*, because we may attend to some one quality, property, modification, or attribute, of an object, without attending to any other ; and notions are not representations, but mere definitions or indications of the objects of our consideration.

consideration. Thus, though colour cannot exist or be represented separately from extension, yet it can be considered without any attention to extension: thus the properties of different colours may be explained without any attention to the extension on which they appear; and in the same manner we may consider the properties, qualities, modes, or attributes, common to various objects, without any attention to the other modes or properties, &c. of those objects, or to any of the various objects to which those modes, properties, qualities, &c. belong: thus, for instance, we may measure the length of a road, without attending to its breadth; or the dimensions of a field, without attending to its soil, whether grassy, rocky, moor, or morass, though we cannot avoid perceiving these peculiar circumstances: thus abstract notions serve every purpose for which abstract ideas were thought necessary.

SECT. II.

GENERALIZATION.

To generalize an object is to make it either the representative or the sign of many particular objects.

720. Thus, as an instance of generalization by representation, a line, though but an inch long, may represent lines of any length, as it does when a method is given of cutting it into two equal parts; for whatever is demonstrated concerning it is equally true of all other lines; or, in other words, of lines in general, let their length be what it may, as its length is no way concerned in the demonstration. So a particular triangle, for instance an isosceles, may represent all sorts of triangles, as to those properties that are common to all of them; thus it may serve for the demonstration, that the three angles of all right-lined triangles are equal to two right angles, because neither the length of the sides, nor the species of angles they form, are at all concerned in the demonstration; and thus the picture of an animal represents, as to their specific appearance, all animals of the same species.

721. So ideas may be reckoned general, when they are indeterminate; thus a groan, or laughter, or a word uttered, will suggest the idea of a man; which idea will not, in many

many cases, represent exclusively any determinate individual, but any at pleasure.

722. It has been objected, “ that if in the
 “ triangle we have in view, we do not dis-
 “ tinguish what is common to all triangles
 “ from what is not, it would be impossible to
 “ discern whether something that is not com-
 “ mon be concerned in the demonstration.”
 Which is plainly a mistake; one need know no more of triangles than that they are bounded by three right lines: this being their definition, must be applicable to all of them; one need not notice the distinctions of triangles, as the demonstration evidently requires none of them in particular, and consequently extends to all of them, since they are all equally triangles.

723. Thus a demonstration always rests on a general truth, and not on a mere induction of particulars; for a truth is general when it extends to numerous other cases besides that from which it was deduced; and it always does so, when the essential circumstances being the same, the peculiarities attending each particular case do not affect it.

724. But the objects most capable of uni-
 versal

verbal generalization are *words*; and as these do not represent any object, but are constituted its signs by those who use them, they are said to *signify* it.

725. Words, when used as *substantives*, can denote all classes of beings: thus, the word *animal* signifies all species of animals, whether men or brutes, and also the individuals comprehended under all those species, and consequently the subordinate genera, as quadrupeds, birds, fish, and insects; so also they may denote classes of inanimate objects, that in many respects resemble each other, as houses, cities, villages, rivers, mountains, trees, &c.: which words denoting equally and immediately such numerous objects, are therefore called *apellatives*. They may also denote the peculiar character or essence of various genera or species, as *animality*, or *human nature*; the *Godhead*, or *divine nature*, &c.: and when used as *adjectives*, they may denote generic or specific properties, as *animal* functions, *human* actions, &c.: or general or subordinate denominations, as *European*, *German*, *Austrian*, *Saxon*, &c.

726. Not only single words, but propositions formed of them, become general, when
no

no peculiar circumstance, limiting them to a particular case or object, or arising from the nature of things, is contained in them; see Log. N° 89 and 90, &c. Thus, when it is said, that *whatever has extension is divisible*, this is meant of extension in general, of which we have a notion, since it means no more than *all extended things*, without particularising either wood, stone, metal, &c. or admitting any exception.

727. In the same manner written characters, or arithmetical and algebraic signs, denote general words, not only in one language, but different yet equivalent words in different languages; thus 5 denotes *five* in English, *cinque* in French, *quinque* in Latin, *pente* in Greek, &c. Of this sort also are the Chinese characters, to which different yet equivalent words are said to be annexed in the Chinese, Japanese, Tonquinese, and Siamese languages.

728. All sciences, as far as they are universal and demonstrable by human reason, will we find conversant about *signs*, whether vocal or technical, as their immediate objects; though these, in their application, are referred to *things*; for, as the mind is better acquainted

quainted with some sorts of objects, which are earlier suggested to it, strike it more sensibly, or are more easily comprehended than others, it is naturally led to substitute these objects, for such as are more subtle, fleeting, or difficult to conceive; now it is certain we imagine before we reflect, and we perceive by sense, before we imagine; and of all our senses, the sight is the most clear, distinct, various, agreeable, and comprehensive; hence it is natural to assist the intellect by the imagination, the imagination by sense, and the other senses by sight; hence figures, metaphors, and types; we illustrate spiritual things by corporeal, we substitute sounds for thoughts, and written characters for sounds.*

SECT. III.

OF CONSCIOUSNESS AND ATTENTION.

729. Every perception and mental operation necessarily implies a percipient and act-

* Berkeley's *Min. Philos. Dialog.* 7th. sec. 16. on the subjects of abstraction and generalization. See 2d Campbell *Phil. of Rhet.* 92, &c. and Stewart, on the Mind, 188, &c.

ing substance, to which its perceptions or actions are known. Now this notice of a perception or action, by the substance that perceives or acts, is what is called *consciousness*.

730. A perception or action may then be considered, either with regard to the thing perceived or acted, or else with regard to the substance itself that perceives or acts, and which being a living substance necessarily knows that it perceives while it perceives, and acts while it acts. This double conception is what, in the schools, is called objective and subjective : thus, a medal or coin may be considered as to what it represents, or as to the particular mental it consists of.

731. Consciousness, then, is not a perception different from the perceptions of which the mind is conscious, as some have erroneously thought, but identically the same.

732. As sensations may be impressed with different degrees of intensity, (N° 388) and ideas with different degrees of vivacity, (N° 669,) so also may emotions and all mental operations ; so their consciousness, or rather that which the mind has of them, must be susceptible of different corresponding degrees of
of

of vigour ; it may even be so feeble as to be nearly evanescent : thus, the consciousness of our closing our eyes in winking is so feeble, that without reflexion we should scarcely believe, that while it lasts we are in the dark, and even for some seconds in a minute ; and such is the consciousness of our ideas during a sound sleep.

733. *Attention* is a lively continued notice taken of the objects of our sensations, ideas, notions, emotions, or of any mental operations or series of objects. Thus, if I take a general undistinguishing view of a flower garden, the notice I take of each flower (and some I must take, if I see it) is so flight and superficial, that if I be asked a moment after, whether I saw a tulip, I may not be able to remember whether I did or not : but if I single out any flower in particular, and view it for a few seconds without interruption, or thinking of any thing else, I am then said to *attend* to it.

734. The notice taken of the objects, of ideas, notions, &c. is also called *consideration*, or reflexion ; and if continued and uninterrupted, an *attentive consideration*.

735. Attention to numerous or extensive visual sensations or ideas, is properly called *contemplation*;

contemplation; such as a general but uninterrupted view of a flower garden, of the sea, or of the heavens: so we may be said to contemplate the causes of the rise or fall of empires, &c.

736. But a continued perception is not always necessary to attention: a sudden lively sensation, though instantaneous, and particularly if accompanied with pleasure, pain, or surprise, or other strong emotion, will attract all the notice the soul is capable of: for instance, a sudden flash of lightning; a wound or hurt attended with much pain; or exquisitely agreeable or odious tastes, sounds, or smells; violent emotions of joy, grief, anger, fear, &c. or deep remorse.

737. Attention is generally voluntary, and consequently requires an act of the will; but it sometimes is involuntary and forced; such is that extorted by exquisite pleasure or pain, or sudden lively sensations.

738. It is also capable of various degrees, from the slightest to the most intense, in which the faculties of the mind are wholly absorbed; such was that of Archimedes, who was so attentive to a mathematical speculation,
and

and inattentive to every thing else, as not to heed the bustle of a town taken by assault, nor even the bursting open of his door by a savage foldier; not but he must have perceived it, but his perception was so feeble as to excite no notice.

739. Attention to one object diminishes, in proportion to its degree, attention to every other object, and hence strong attention to two objects is more difficult than to one; the difficulty increases with the number of objects, and thus it is always so much the more feeble as it is more divided; yet if the objects be very simple, such as the sounds and characters that form words or musical notes, by long and early habit they become so familiar, that the slightest attention to them is sufficient to suggest their prototypes with the greatest facility and rapidity.

740. Attention to notions is more difficult than attention to ideas, and attention to ideas is more difficult than that given to sensations, or emotions.

741. Attention to sensations is so much the stronger, as they are more lively and impressive: thus a strong sensation or lively idea diminishes attention to the more feeble; but
ideas

ideas may be so lively, as to diminish attention even to sensations, and so may also emotions and passions, as those of shame, anger, love, pride, &c.

742. The power of bestowing attention is very different in different minds, and to all it is much easier to give it to some objects than to others; it may be excited, in almost any minds by strong motives, or motives that, from a peculiarity of constitution, appear to them particularly gratifying or alluring, as a passion for particular studies.

743. Attention to such facts as nature presents to us, without our assistance, is called *observation*; but the facts which nature presents to us, in situations which we ourselves have prepared, are called *experiments*: close attention to past facts, their expected consequences, or to designs expected to be effected, is called *meditation*: that paid to our past sensations, or to *our own* ideas, notions, or mental operations, is called *reflexion*.

SECT. IV.

OF THE ASSOCIATION AND CONNEXION OF IDEAS,
NOTIONS. AND MEMORY.

744. Ideas, notions, emotions, and passions, are partly associated and partly connected with each other ; I call them *associated* when they accompany or border on each other, and *connected* when they frequently suggest or follow each other.

745. In nature, sensations of any given kind are scarce ever single ; they are usually accompanied or immediately preceded or followed by various sensations, which are thence called their *circumstances*. Of these, some are *necessary*, as those of time and place ; and some are *accidental*, as the different events that accompanied or immediately preceded or followed : thus the death of Cæsar happened on the ides of March, and in the senate house, and was immediately preceded and followed by other events, of which historians give a minute account.

746. Hence ideas, being copies of sensations, are associated with the same train of ideal circumstances.

747. So also, as a sensation is often followed by another of which the preceding is deemed to be the *cause*, in the same manner the idea of the preceding sensation will immediately be followed by that of the effect. But the reverse does not always happen, as the same effect may be produced by different causes; thus, as death may proceed from various causes, none of them in particular is suggested by its idea, unless the cause of it was also perceived by sense.

748. Again, as numerous sensations are more easily observed, when presented in a certain *order*, than when they are perceived in a confused irregular manner, in the same manner their ideas present themselves in the same order, and difficultly in any other.

749. Further, as an artificial association is frequently formed betwixt two sensible objects, so that the perception of the one suggests that of the other, and thus becomes its *sign*, the same association is formed betwixt the idea of the *sign*, and that of the thing signified;

signified ; but the reverse does not easily take place ; for, as the sign was instituted for the sake of suggesting the thing signified, not the reverse, more attention was originally paid to it in that relation, but much less in the converse relation ; thus a word, or even its idea, more easily suggests the object it denotes, or its idea, than the object or its idea suggests the word proper to denote that object ; and hence we oftener forget names than the persons or things they denote.

750. In the foregoing cases, the association of ideas is grounded on the relation of *contiguity*, that is, vicinity in time or place, that of *causation*, that of *order*, and that of *signification*.

751. In the following instances ideas seem rather to be connected than associated in the strict sense of the word, and more or less effort is necessary to form the connexion.

752. And, first, as the sight of different objects does, after some attention, occasion the notice of the properties, qualities, or other points, in which they agree, and of those in which they disagree, so does meditation on their ideas : it is the notice thus taken that leads

leads us to assign generic, specific, or general names to various objects, and on it all classification is founded. Here then the connexion is founded on the *relation* of similitude; it is this principle also that suggests metaphors and allegories.

753. This similarity is sometimes very remote, being traced not from any sensible appearance of objects, but from analogous effects, similar relations or consequences: thus a connexion is discovered betwixt winter and old age, and betwixt spring and youth, betwixt darkness and ignorance, betwixt the head of an animal and the governor of a society: the invention of such connexion not being obvious, is called *ingenuity*: it is also applicable to the discovery of some difference betwixt objects that appear exceeding similar.

754. As in nature opposite sensations of heat and cold, light and darkness, &c. constantly succeed each other, so one idea frequently suggests its opposite, and they thus become connected.

755. The relations therefore on which the connexion of ideas is founded, are those of *similarity, analogy, and opposition.*

756. It may also be remarked, that sensations are often much more strongly associated with ideas, than ideas can be with each other; thus, being on the spot on which great events have happened, brings them to our recollection much more powerfully than the mere idea of such places can. Many beautiful instances of this kind of connexion occur in Professor Stewart's Philosophy of the Mind, p. 279.*

757. Upon the experience of a constant connexion between certain objects, is founded the expectation that *similar objects, placed in similar circumstances, will always be attended with similar results*; but this principle is strictly applicable only to natural events, which are governed by general laws, and not absolutely and peremptorily to the actions of free agents; for experience, or rather history, teaches us, that these in some, (indeed uncommon instances) may be widely different from those which are usually observed to take place in similar cases: how many sovereigns have been in circumstances similar to those in which Dioclesian, Charles the Fifth, and Victor Amadeus, found themselves; yet how few

* Octavo edit.

like them have abdicated their power ! And to pass over numerous other examples of the strict inapplicability of this principle to the investigation of human actions, in which probability alone can be expected, in applying it even to inanimate objects, their similarity to those whose effects have been already experienced, and also that of their circumstances, must be exactly known, before a well-grounded expectation of similar effects can be rationally entertained.

758. Hence also the firmness with which notions and opinions received and impressed by early education are adhered to ; for men having, from their earliest infancy, observed the succession of natural events to have corresponded with the predictions of those by whom they were educated, naturally infer their sentiments and opinions on other subjects to be equally conformable to truth : their attachment to them is still further strengthened by the love and reverence they bear to those from whom they received them.

759. *Memory*, considered as a faculty of the mind, is the capacity of recovering, though more or less enfeebled, those states by which

it was antecedently modified, or their signs, together with an instinctive persuasion of their preceding existence. The states thus recovered are said to be remembered.

760. I call it a *capacity*, because it is not a power *directly* possessed and exerted by the mind of recovering those states, this being an act of Divine Agency, as much as their original formation; and indeed it were a contradiction that it were otherwise, for then we should form the memory of an object, before we remembered it; but having the slightest hint of the object endeavoured to be remembered, the mind may, by an attentive consideration, research, and scrutiny, of associated circumstances or connexions, often obtain a more perfect recollection.

761. The persuasion of the anterior existence of these states is derived from three signs, of which the two first are instinctively known to be such; these are, first, the *vivacity* with which these states, or their signs, reappear: secondly, their *ready, free, and unconstrained* association with circumstances, also more vigorously impressed on the mind, than if they had been barely imagined: thirdly, *their*

their connexion with consequences, either necessarily or probably resulting from the pre-existence of those states only, and not from any other cause.

762. The sensations received from the sight or hearing, are almost the only states of which the ideas can be fully recovered, at least after a long interval. The ideas of taste or smell are little more than instantaneous; the ideas of rough and smooth are more durable; but the sensations of heat or cold, hunger or thirst, or other sufferings, cannot be expressly recovered; their existence can only be traced from their signs, associated circumstances, and resulting consequences: thus also the knowledge of pre-existing notions is revived, and also the discernment of relations, judgments, argumentations, volitions, emotions, or passions previously had.

763. Signs are either natural, as sighs, groans, &c.; or conventional, as words, whether spoken or written; and as these are either vocal or visible, they are most easily remembered, and through them the things they signify.

764. Memory may be considered in a double point of view; either as the *capacity* of receiving

ceiving ideas or their signs, as already said ; or as the *facility* of recollecting them : this however requires the concurrence of the will, at least in common cases, for certain strong emotions, such as those of grief, anger, and remorse, may even *unwillingly* be renewed. Both the capacity of receiving, and the power of recollecting ideas, are possessed by different minds in degrees astonishingly different.

765. That memory is some how connected with organization, that is a peculiar arrangement of obscure sensations, is certain, from its general decay in old age, and in consequence of various disorders by which some of those obscure sensations are effaced, but the mode of connexion is perfectly unknown. See 1 Crichton, 358.

766. *Imagination* is the power of compounding, curtailng, and arranging ideas, and of combining the signs, whether of ideas or of other mental operations, in an intelligible manner, different from the arrangement, according to which sensations, of which they are the copies, were originally impressed, and in this it differs from memory.

767. I call it a *power*, because it commonly includes an act of the will ; yet its representations

tations sometimes arise involuntarily, by reason of some early association, or fear, &c. as when spectres or other frightful objects are imagined in the dark.

768. The only ideas which the imagination can command, are those of visible or audible objects; of other sensations it can present only their signs, which are themselves visible or audible; yet these signs affect us nearly, if not fully, as much, as the ideas of the objects they signify could: this must be evident to any one who considers the words, *fragrant, bitter, sweet, sour, sharp, blunt, hot, cold, painful*; nay even the ideas of visible or audible objects are not always necessary; their signs, when we are long accustomed to their connexion with the things signified, are fully sufficient; for, from long experience of their intimate association, their effects on the imagination become identified; thus money, though merely a *sign*, is as much coveted as the things it can purchase or procure, though it suggests none of them in particular; Mr. Locke justly observes, that we frequently think by words and not by ideas.

SECT. V.

OF SIMPLE APPREHENSION, CONCEPTION, AND
COMPREHENSION.

769. *Simple apprehension* was a term anciently used by the scholastics to denote the mere idea of a sensible object, without affirming or denying any thing concerning it : it was never applied to fictions of imagination, and but seldom to *notions*, which they called *intellections*. See Pourchot, Log. 46.

770. *Conception* anciently, at least for the most part, denoted an *idea generalized* ; thus the nominalists called the idea of a circle, when representing all circles, the conception of a circle, from *cum et capere* ; but at present it is taken for an *idea*, or *intellection* ; thus professor Stewart calls it an exact transcript of what we have felt or perceived ; Phil. of the Mind, p. 135. And by *intellection* I mean a knowledge of the signification of signs, such as words or propositions, or the meaning of notions ; as when I say I conceive *God* to be a necessary being ; I conceive *virtue* to consist in conformity to his will ; I conceive the meaning of the word *chilibædron*,

chilihædron, but can form no idea of it; that is, I understand the meaning of the word *God* to be, that he is a necessary being; and that of the word *virtue* to be conformity to his will. When we speak of conceiving or understanding a *general proposition*, we mean nothing more, (as Mr. Stewart justly observes, p. 196,) than that we have a conviction that we have it in our power to substitute, instead of the general terms, some one of the individual instances comprehended under them.

771. To *comprehend*, is frequently taken in the same sense as to conceive or understand, but, as I think, improperly, except when it is used to denote understanding a series of propositions. In *logic*, it denotes all that a term, particularly a general term, can signify: thus the term *animal* comprehends all animals.* In *metaphysics*, it denotes the knowledge of all the properties of an object.

* 5 Pouchot, 10. 269. I Pouchot, 60. Segui Log. 81, 82. III.

CHAPTER V.

OF THE SIGNIFICATION OF TERMS DENOTING INTELLECTUAL ABILITIES AND DISABILITIES.

SECT. I.

OF INTELLECTUAL ABILITIES.

772. *Understanding* is the general name given to the intelligence of notions, and also to the power of receiving ideas, and of imagining, attending, comparing, reflecting, judging, and reasoning. Sensations also, as being the original stamina of thought, are referred to this faculty. To *understand* a *sign*, for instance a word, is to be aware of, or acquainted with its signification. Locke defines the understanding to be the faculty of thinking.

773. *Knowledge* of a *speculative object* consists in having such an idea or notion of it as enables us to distinguish it: knowledge of a *fact* consists in a well-grounded persuasion of its existence; thus if I were asked whether such a city as Rome had existed, or whether God exists,

exists, were it not ridiculous to say, I did *not know*, but barely *believed* it? See N° 829.

774. *Thought* denotes every state of the mind referable to the understanding, except sensations; for surely seeing, smelling, tasting, &c. are not thoughts, but perceptions.

Perception is a term applicable to all the passive states of the mind.

775. *Discernment* is the discovery of a relation betwixt objects compared with each other.

776. Intellectual abilities relate either to the understanding, or to the imagination, or to memory.

777. Those that relate to the understanding are genius, penetration, solidity, depth, sagacity, subtlety, perspicuity, and power of illustration. All evidently refer to the discovery of truth, and some to the detection of falsehood.

778. *Genius* denotes an uncommon power of discovering abstruse and important truths.

779. *Penetration* indicates the power of tracing and discriminating the characteristic ingredients of complex and complicative notions, and the truth, solidity, or defects, of
abstruse

abstruse or plausible reasoning : it differs little from sagacity.

780. A *solid understanding*, is that which, by cautiously distinguishing certainty from probability, the degrees of probability from each other, and both from uncertainty, mere possibility or falsehood, is not easily imposed upon.

781. A *solid argument*, is that whose truth is not doubtful, or at least not exposed to any well-grounded doubt.

782. A *solid reasoning* is that which consists of solid arguments, duly connected.

783. *Depth of understanding* consists in an accurate and distinct knowledge of the numerous notions or ideas contained in or connected with any subject.

784. *Sagacity* consists in discovering causes when obscure, (see an instance in Grotius's Preface to the First Epistle of John, p. 1126;) or discovering relations where none are apparent, or the most suitable interpretations where the sense is ambiguous ; by *suitable*, I mean conformable to the occasion and context, and not contradicting any other known truth ; from *saga*, or *sagar*, quick scenting.

785. *Subtlety* denotes the power of framing observations, deducing consequences or inventing arguments not obvious: it is frequently too refined to be solid, or too abstruse to be clearly intelligible.

786. *Perspicuity* consists in explaining and treating any subject in terms clearly intelligible, unambiguous, and appropriate.

787. The *talent of illustration* is that of rendering a subject more distinctly intelligible by apt similitudes, or examples.

778. The abilities that relate to the imagination, are genius, talents, wit, acuteness, and taste.

789. *Genius* consists in the enthusiastic power of fascinating the imagination, by sublime or beautiful imagery, and exciting the strongest emotions: its most powerful effects are produced by the union of poetry and music.*

790. *Talents* for the fine arts consist in powers of the same nature, but possessed in a more temperate and inferior degree.

791. *Wit* consists in discovering unex-

* Voltaire, Dict. Philo. 22.

pected relations of similitude betwixt objects obviously dissimilar; or of dissimilitude betwixt objects apparently similar; or of contrariety and opposition, where none could well be suspected.

792. *Acuteness* consists in discovering differences betwixt notions apparently similar, or betwixt the signification of words apparently synonymous.

793. *Taste*, when just, consists in perceiving, with a proportionate degree of pleasure, the beauties of a composition, and its deformities with a proportional degree of disgust: a *refined taste*, is that which perceives the minutest degrees of either: a *depraved taste*, is that which receives pleasure from what should excite disgust, and disgust from what should give pleasure: a just taste is commonly formed by comparison and reflection.

794. *Ingenuity* denotes the possession of some or other of those abilities in a remarkable degree. It is evident that all are susceptible of different degrees.

The Abilities of the Faculty of Memory.

795. They may be reduced to three; the facility of acquiring and committing to it the objects

objects sought to be remembered, the power of retaining them for a length of time, and the readiness of recollecting them. All susceptible of different degrees.

SECT. II.

OF INTELLECTUAL DISABILITIES.

796. Intellectual disabilities arise, either from a total or partial privation of the common intellectual powers, or from a total or partial perversion of some or all of them, and sometimes even of the pathetic emotions.

797. Hence they may be reduced to two classes, those that arise from privation, and those that consist in perversion.

798. Those that arise from privation, are *ideocy*, *stupidity*, an uncommon want of memory, and incapacity of attention and of recollection.

799. *Ideocy* consists in the incapacity of distinguishing moral good from evil, comparing, discerning, or abstracting, when at the

period of life in which those faculties should exist.

800. *Stupidity* consists in a difficulty of learning the signification of signs, or of exerting any of the above-mentioned powers; but it is seldom total: it may relate to one class of objects and not to others; it may relate to speculative objects but not to the common transactions of life, and social intercourse; to one class of speculative objects and not to other branches. *Dulness* denotes a lesser degree of stupidity.

801. *Incapacity of attention* may also relate only to certain objects: defective memory and recollection, if total, amount to ideocy; but these defects are seldom so remarkable; the diminution of both these powers commonly accompany advanced age.

802. And in general, we may infer a weakness of understanding in those in whom, after due examination, the strongest proofs produce no conviction.

803. The disabilities arising from the perversion of the intellectual powers are numerous; I mean not to comprehend that inco-

herence and confusion that constitute the delirium of a fever, nor those that arise from a perverse will, nor consequently the criminal transgressions of the laws of God or conscience, but merely those that arise from disordered intellectual powers: those principally affected are the imagination and judgment, and sometimes the passions and emotions.

804. The most considerable perversion of the imagination consists in mistaking imaginations for sensations, with a full conviction of their reality; or in imagining oneself to be what he is not, a king, or emperor, or made of glass, &c.; or in mistaking objects for what they are not, as logs of wood for instruments of war, &c. This disorder constitutes madness, or phrensy, if accompanied with audacity, impudence, or violence; or melancholy madness, if accompanied with unreasonable fears, despondency, and dejection.

805. There is a state of imagination bordering on insanity, and sometimes passing into it: this consists in an uncommonly vehement and rapid flow of ideas, catching at the slightest or most distant associations: this, while

ever is, is; or that it is impossible to be, and not be at the same time; for children never think of such universal truths, nor do even the greater part of mankind, of which, nevertheless, if such truths were innate, they must be conscious; it is only the capacity of discovering them that is innate; but the actual knowledge of them is acquired. And so far even Leibnitz, though a Platonist, agrees with Locke; for he owns, "on peut pas les lire a
" livre ouvert, sans peine et sans recherche
" c'est assez qu'on puisse les decouvrir on
" nous, a force d'attention." The mind at first acquires sensations, then ideas; to these names are given, and by degrees general names are understood, and at last general notions. A child knows not that four and three are equal to seven, until he can count seven, and thus he acquires the notion of equality.

822. In the same manner simple *speculative* truths are discerned, when the terms they consist of are understood; so all other *speculative* notions are known by reasoning; none can be deemed innate.

823. Practical moral truths, when simple are discerned when the terms that express them

them are understood ; not by reasoning, but instinctively by the moral sense, which, like other senses, is by nature implanted in us ; but if more *complex*, the assistance of reason is required to distinguish and develope the various relations which they involve, which must be attended to, and evolved, before a case can be rendered sufficiently clear to enable the moral sense to suggest any decision. The duties of gratitude, justice, and fidelity to contracts, all men agree in allowing; many indeed fail in performing them, because they are also actuated by other instincts as forcible as their moral instincts, which frequently contradict its dictates ; and men have the liberty of choosing which of those instinctive principles they will obey.

824. Locke thinks, that outlaws and robbers practise the rules of justice to each other merely as rules of convenience, without which their society could not exist ;* but it is plain to me that he is egregiously mistaken ; such abstract considerations seldom occur to that

* Locke, B. i. C. iv. sec. 9.

class of men : the conduct of many of them who have not cheated their associates, even when they could do it with advantage to themselves, nor betray them even to save their lives, evidently proves they were actuated by principles very different from that of mere convenience. All his other arguments are equally weak and groundless, as might easily be made to appear, if this were the proper place: his and Montesquieu's credulity in giving ear to the incredible tales of Thevenot, Garcilasso de Vega, and Baumgarten, is astonishing.

825. Neither is the *notion* we have of *God* innate; it is evidently a conclusion of reason; for the visible marks of extraordinary wisdom and power, appear so plainly in all the works of the creation, that a rational creature, who will but seriously reflect on them, cannot miss the discovery of a Deity.

826. The notion of a *soul* arises from consciousness, memory, and reflection.

827. *General notions* are derived from the relation of similitude, which is either immediately discerned or inferred by reasoning.

Complicative

Complicative notions arise from reflections on various objects connected with each other under a particular name.*

828. Practical experimental truths are evidently learned by our own experience, or by instruction.

SECT. III.

OF THE DEGREES OF HUMAN KNOWLEDGE.

829. Knowledge is a word variously applied; sometimes it is synonymous to the *consciousness* of a perception or any other present state of the mind, as when I say, *I know what I feel, see, or hear*; or *I know that I remember*; sometimes it denotes the *ability of distinguishing*, as when I should say, *I would know my horse among a hundred*; sometimes it is synonymous to *conviction*, as when I say, *I know I had an ancestor one thousand years ago*; frequently it signifies *acquaintance* with a science, as when it is said, *Newton's knowledge of mathematics was profound*.

* Locke, B. ii. C. 22.

830. Knowledge is either *direct*, as that just described, or *indirect*. Direct knowledge is that gained by the medium of one's own senses, and therefore called *sensitive*, or *experimental knowledge*; or by one's own reflection, study, and meditation, such as the knowledge of geometry, logick, metaphysics, &c.: this is called *speculative knowledge*, in contradistinction to *practical*, which denotes the knowledge of the manual arts.

831. *Indirect knowledge* is that which rests on proper testimony, whether written or oral; or it is inferred from the falsehood of a contradictory proposition.

832. Knowledge then is grounded either on consciousness, the perceptions of sense, the discernment of relations, or the suggestions of memory.

833. By *consciousness*, the existence of states of the mind, whether active or passive, is known, and consequently the perceptions of sense, emotions, affections, passions, judgments, and the dictates of the moral sense.

834. On the *discernment of relations*, judgments and reasoning are founded.

835. On the relation of analogy, and partly also

also on instinct, the *persuasion* that the past resembled the present in similar cases, and the *expectation* that the future also will resemble the present, and consequently what is called experimental knowledge, entirely rest.

836. On the same grounds, the admission and reliance on testimony are grounded.

837. From the suggestions of memory, the continuance of every species of knowledge arises.

838. The degrees of knowledge are various, but it is only to the higher degrees, that the denomination of *knowledge* is attributed.

839. The degrees of knowledge result from a more or less perfect discernment of relations, or from a more or less perfect memory.

840. The highest or supreme degree of knowledge is founded either on consciousness, or on the full, clear, and accurate discernment of the relations of identity, equality, or coincidence, or of the relation of causation, or on that of inclusion, or on the primary dictates of the moral sense, or on Divine relation, clearly proved and ascertained, or on perfect memory. See N^o 761.

841. Knowledge thus grounded is called
E E 2
evident,

evident, the conviction arising from it being similar to that resulting from clear and distinct vision: it is attended with a sentiment of firm and entire confidence, which is called *certainly*, a term also borrowed from vision, and the objects of it are also called *certain*, that is, deemed to be as clearly known as if they had been seen.

842. But unfortunately such confidence attends, and has attended judgments, not grounded on evidence, nor even on any approximation thereto, but, on the contrary, clearly proved to be false. Such as that the planet we inhabit is a flat and not a round mass; that the sun moves round it, that it rises and sets, &c. Such judgments proceeded from inattention to the frequent mistakes occasioned by reliance on mere appearances in numerous instances, and not remarking that it is from experience alone we learn to form a true estimate of the credit that should be given to them.

843. In the same manner judgments early formed, and long persisted in, but originally grounded on authority, perhaps indeed the most respectable, are adhered to with the utmost

most confidence, and considered as absolutely certain, though the slightest reflection might convince men, that betwixt any authority (except the Divine) and any speculative truth, no necessary connexion subsists; and that the most opposite tenets are supported by authorities equally respectable; that therefore a strict and impartial examination can alone lead to a decision that may be fully relied upon.

844. The passions of hope, fear, love, hatred, party attachments, impatience, disgust, in short all passions, form another copious source of delusion, either by urging precipitate decision without any examination, or preventing a due attention to the reasons that oppose the side of the question they favour; yet the decisions they suggest are frequently relied on with the utmost confidence, and considered as certain.

845. Though evidence is not susceptible of degrees, nor consequently the certainty that attends it, yet there are many approximations towards it, and the nearest or highest of these are very properly attended with a degree of confidence equal to that which results from

evidence itself : such approximations when found in moral subjects, are therefore said to be *morrally certain*, and when in physical subjects, *phyfically certain* : this certainty is fufceptible of degrees.

846. *Moral certainty* relates to facts ; when derived from unimpeachable testimony it is called *extrinsic* ; when on reasoning from indubitable facts, human nature, or the characters of men, it is called *intrinsic* ; but these characters can frequently be known only by testimony, confequently intrinsic certainly frequently involves extrinsic.

847. *Physical certainty* in many instances is founded on our own constant and uniform experience of fimilar effects in fimilar cafes, but our more extenfive knowledge of the conftancy, and uniformity, and univerfality of thefe or any other effects, is folely derived from approved testimony, as no man has lived in all ages, nor has feen what paffes or has paffed in all other countries, in many of which, events happen or have happened unexperienced in other countries or ages. Thus the phyfical certainty, even of the laws of nature, embraces alfo moral certainty. That
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the present generation had ancestors two thousand years ago, though now unknown, is physically certain; for who can doubt it? And it is equally certain that we shall die, though we have not experienced death: hence physical certainty does not always require conformity with our personal experience. Particular results from unknown laws of nature, as earthquakes, volcanoes, &c. are from uncontroverted testimony known with certainty by those who never have witnessed such phænomena.

848. The convictions gained by such close approximations to evidence are also knowledge, but persuasions grounded on more distant approximations, are known by the name of *opinions* or *belief*, and the things believed are called *probable*.

Probability is susceptible of various degrees; the lowest is called *suspicion*; below it we rank *doubt*, *improbability*, and impossibility.

849. Judgments therefore are either evident and certain, or certain though not evident, or more or less probable, or merely doubtful.

SECT. IV.

OF TRUTH, REALITY, AND REASON.

850. *Truth* is taken in two senses: first, it is taken for the existence of a correspondence, conformity, or agreement of signs, with the things signified; or for the absence of such correspondence or agreement, where they do not exist: thus, that *a circle is a line whose parts are equidistant from a common centre*, is a true proposition. So *that five and three are not ten, is also a true proposition*.*

851. Secondly, truth is taken as synonymous to *reality*, and reciprocally by reality truth is understood; *true gold* denotes real gold, having all the properties of gold; a true circle denotes a figure that is really circular: it is then understood in contradistinction to merely *apparent*, fanciful, or imaginary. *Apparent* is a term borrowed from the sense of feeling, and *real* is a term taken from the sense of feeling. Now, as we are often deceived by the suggestions of sight, and never by the sense of feeling, *reality* and truth are considered as

* A Pourchot, 52.

synonymous;

synonymous: yet, as the suggestions of sight, when corrected by experience, are not at variance with sensations of feeling, appearances and reality often coincide; the same thing may be true both in appearance and in reality.

852. *Reality*, then, though originally a term applied to the objects perceived by the sense of feeling, is also ascribed to all other objects, of whose existence we are as confident as we are of the existence of the objects of that sense.

853. Evident truths never contradict each other, but truths that are *barely certain* may in a few instances: thus, though it is physically certain that bodies specifically heavier than water will sink in it, it is equally certain that leaf gold, though twenty times specifically heavier, will not sink in it. Miracles are also exceptions to those general laws of nature on which our certainty of facts, contradictory to those miraculous facts, are founded.

854. Thus, truths grounded on *moral certainty* or *revelation*, may contradict those grounded on *physical certainty*; and, *a fortiori*, they may contradict truths that are barely probable;

probable ; but they cannot contradict those that are evident.

855. A *false proposition* is not always *contrary* to a true proposition, for it may be contrary to another false proposition : for instance, the following contrary propositions are both false ; *all men are white, all men are black.**

856. Of truths, some are necessary, some contingent ; *necessary* truths are those only which are evident ; *contingent* truths are those which may or might, by any possibility, not have existed.

857. *Reason* is also a word susceptible of different senses.

First, it is taken for the power or *faculty of reasoning*, or in other words the discursive power, as some call it ; as when it is said, that *man is the only animal endowed with reason.*

858. Secondly, it is taken for the *exercise of that power*, and also for the perceptions of the moral sense ; as when we say that *the conduct of men should be governed by reason.*

859. Thirdly, it is taken for *truth*, and for

* See Log. Vol. I. N^o 115,

right, as when it is said, that an opinion, judgment, or system, is *conformable to reason*; or *that it is right*, or *conformable to justice*.

860. Fourthly, it often denotes an argument by which we would prove any truth, or refute any falsehood; as when we say, *this must be true, for this or that reason*.

861. Fifthly, it is taken for 'occasional, or efficient, or instrumental, cause: as when we say, *the reason of his change of conduct, was a trivial accident, &c.*

Sixthly, it is taken for a *motive*, or final cause.

862. A reason may be either evident, certain, probable, right, just, or proper, or the contrary.

863. A proposition, or action, or conduct, is said to be *conformable to reason*, when agreeable to certain or evident truths, or even to probable truths, where neither evidence or certainty can be attained; or when agreeable to the dictates of the moral sense.

864. A proposition is said to be *contrary to reason*, first, when it contradicts any evident truth; secondly, when it contradicts any truth physically certain, unless this be contradicted
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by a superior certainty ; thirdly, when it contradicts a probable or more probable truth.

865. A truth is said to be *above reason* when it is not directly discernible by our reasoning faculty, nor *analogous* to any known truth, and yet is necessarily connected with and inferred from, a known truth, or contradicts a known falsehood. That the Supreme Being is *eternal*, is a truth of this sort, being inferred from the necessity of his existence.

SECT. V.

OF THE DEGREES OF ASSENT, CERTAINTY, AND PROBABILITY.

866. The first and highest degree is that which we give to evident truths, whether intuitive or demonstrative, metaphysical, mathematical, moral, or revealed. The intuitive perhaps demand the highest, as they are immediately discerned, and also those that are immediately revealed ; whereas those that are demonstrated, particularly the mathematical, require the exercise of memory ; but when the process of deduction is repeated, and each step

is intuitively evident, the whole is as evident as the first step.

867. The second is that given to irrefragable testimony.

868. The third is that given to mathematical or other propositions, which we perfectly remember to have once demonstrated, and are generally received, but whose demonstration we cannot now recollect.

869. The fourth is that which we give to the laws of nature, which we have learned by experience or irrefragable testimony, even though we should not now recollect the experiments from which those laws were inferred. *Experimentum fallax* is an aphorism generally received, but not *experimenta sunt fallacia* : a single experiment may not be a foundation sufficiently solid on which to erect any law, but numerous experiments are, if uniform and universal.

870. Here certainty ends.

871. The fifth is that given to facts intrinsically *probable*, and supported by credible testimony, but whose probability, whether intrinsic or extrinsic, is susceptible of increase.

872. The sixth is that given to an argument

ment or opinion which is deemed more probable than that opposed to it. It may be increased by its agreement with the opinions of men of the most respectable authority, or diminished by their opposition, if disinterested and disprejudiced.

873. The seventh is that given to *indifferent* facts supported by credible testimony, but susceptible of increase.

874. The eighth is that given to uncommon and marvellous facts, supported by credible testimony, but susceptible of increase.

875. Consequences logically deduced from any principle or truths, are as certain as the principles from which they were deduced: but probable consequences are less probable than those from whence they were deduced.

876. The ninth is that given to propositions not understood by the person who assents to them merely on highly respectable testimony; of this sort are many mathematical and other scientific propositions, which are credited though not understood by persons ignorant of those sciences.*

* Locke, B. iv. c. xv. sec. 1. and my Log. N° 686, Vol. II.

SECT. VI.

OF ABSURDITY, UNINTELLIGIBILITY, INCOMPREHENSIBILITY,
INCONCEIVABLENESS, AND INEXPLICABILITY.

877. *Absurd.* Whatever contradicts opinions generally received, is deemed absurd, whether those opinions be true or false; hence we see an opinion or proposition may be *really* or *falsely* deemed absurd. In the latter case the absurdity is merely *imaginary*: thus the Copernican system, and the notion of antipodes, were long reckoned absurd.

878. A term is *unintelligible* when it has no signification, as *blytri*.

879. Complex terms are *unintelligible* when repugnant to each other, though each be intelligible, as a *round square*.

880. A complex term is also *unintelligible* when no relation can be discerned betwixt the terms it consists of, though each apart may be understood; for instance, the substantial *forms* of the peripateticks, the interior moulds of Buffon, &c.

881. A proposition is *unintelligible* when the terms it consists of are destitute of any signification,

signification, as *blytri* is *bocardo*, or the *soul* is *bocardo*; or whose subject and predicate are repugnant to each other, as *God is unjust*.

882. But if the terms of the proposition bear any analogy to terms whose signification is known, it may be understood, though imperfectly: thus colours are not entirely unintelligible by a blind man, as I have elsewhere shewn; though he can form no idea of them.

883. A thing is said to be *incomprehensible*, first, when all its properties cannot be known, and in this sense all things are incomprehensible; and, secondly, when it is imperfectly intelligible, as the eternity and infinitude of the Supreme Being. But we may form notions of them, though imperfect.

884. A proposition is *inconceivable* when neither an idea nor a notion of it can be formed; and thus it differs from incomprehensible.

885. A thing is *inexplicable* when the series and operation of its intermediate causes cannot be assigned. Inexplicability, or inconceivability, is a just exception to an unproved hypothesis, though it be not to a known fact

or acknowledged truth. Clarke's Reply to Waterland, 305, 306.

CHAPTER VII.

OF HABITS.

886. *Habit* is a long-continued repetition of action or endurance, by which a greater facility of either is commonly gained. I say endurance, because a person may be habituated to abstinence, fasting, cold, and other privations, which, from frequent repetitions, are more easily endured: habits therefore may be either active or passive. To be habituated, signifies to have undergone frequent repetitions of either kind.

887. The commencement of either kind of habit is fully attended to, being frequently accompanied either with pain or pleasure; but in its progress, both are gradually diminished and finally vanish; and, what is more extraordinary, the pain is often transformed into pleasure, as in the habit of chewing, smoking, and snuffing tobacco: and pleasure frequently

terminates in disgust, as may be observed in scenting sweet smells, the repetition of the same story, jest. &c.

888. In habitual action, though some degree of attention be absolutely requisite, yet its degree is often so small and so transient, that it cannot be recollected; this is strikingly apparent in the rapid execution of music, where the notes, both of treble and bass, and the proper position of the fingers, must instantaneously and simultaneously be attended to, though the different volitions requisite for each cannot be recollected. The same fugacity and oblivion of attention are observable in reading, rope-dancing, &c. See Stewart's excellent observations on attention, in his *Essay on the Mind*, Part. ii. Chap. 2. And for the same reason a noise to which we are long accustomed, as that of a cascade or water-fall, by those that live in its neighbourhood, ceases at last to be distinctly noticed, its perception being nearly evanescent. Stewart's observations on habits are new, curious, and satisfactory.

CHAPTER VIII.

OF THE FACULTY OF APPROBATION AND DIS-
APPROBATION, OR THE SENTIMENTAL
FACULTY.

889. As by the faculty of judgment we discern truth and falsehood, so by the faculty of approbation or disapprobation we acquire the perception of *right* and *wrong*.

890. These two faculties should not be confounded with each other, for their general objects are different: the object of judgment and reasoning is the discovery of truth or falsehood, the object of the faculty of approbation is the *perception* of right or wrong. Their grounds are also different; those of the judicial faculty are the discernment of the relations of identity, or diversity, similarity, correspondence, causation: the ground of the sentimental faculty, is not a relation of any kind, but a mere perception.

891. The discernment of a truth before unknown is attended with pleasure; but that pleasure is not a perception of any quality in

the objects, but results from the consciousness of possessing the ability of discovering it, or from a prospect of its use in promoting and facilitating practical or speculative knowledge: whereas the pleasure of approbation, and the pain attending disapprobation, arise from a perception of qualities perceived in the objects approved or disapproved.

892. Both faculties agree in this, that the judgments of the one and the perceptions of the other are frequently intuitive. It must also be remembered, that this perception is frequently, though improperly, called a judgment.

893. To *approve* an object, therefore, signifies that we are pleased with it; and by exciting that pleasure, it is said to be *right* or *good*: and to *disapprove* an object, is to be displeased with it; and by causing that displeasure, it is said to be *wrong* or *bad*, faulty or ridiculous.

894. The objects of approbation or disapprobation are either of a *physical* or *moral* nature: the former, if approved, are *physically right, or good*; if disapproved, *physically wrong, or bad*. Thus we approve of a well-con-
trived

trived machine. that answers the purpose for which it was intended, of any useful invention, of an entertaining poem, of an exact representation, of a true history, &c. This approbation extends also to the author of such pleasing works, and then it is called *praise*.

895. *Objects of a moral nature* are those that regard the conduct of men, either with respect to themselves, or towards the Supreme Being, or towards each other. Such conduct or actions as are approved, after a due investigation, if any investigation be required, are said to be *right*, or morally *good*; and such as are disapproved are said to be morally *wrong*, *bad*, or *evil*; such as excite no sentiment of approbation or disapprobation, are *indifferent*, and of this nature are all actions abstractedly considered; actions productive of approbation, but whose omission is not attended with disapprobation, may be called *heroic*.

896. As moral actions are by far the most important, and concern most nearly the happiness of the agent, as well as of human society; and as the pleasure or displeasure attending

tending their perception is by far the most considerable ; the faculty of perceiving those sentiments obtained the name of *moral sense*, or *instinct*, or *conscience*.

897. As there is a natural and evident necessity that we should *love* what pleases us, and dislike or hate what displeases us, this necessity, when applied to the pleasing or displeasing perceptions of the moral sense, is called a *moral obligation*. Consequently we are obliged to entertain those sentiments, and pursue that line of conduct which the moral sense approves, and avoid such as the moral sense disapproves.

898. Such of our actions or sentiments as are approved, and whose omission by us is disapproved, are called our *duties* and *obligations*.

The duties of *others to us* are called *our rights*, and their obligations. *Our* duties to others are called *their rights* and *our obligations*.

899. Though actions, as being manifest, are the primary objects of our approbation or disapprobation, yet the resolutions, intentions, and sentiments, that influence the production
of

of those actions, and the agents, authors, or advisers, &c. from their connexion with these actions, naturally participate of the approbation or disapprobation which those actions excite.

900. As actions that are *approved* give us pleasure, they naturally excite benevolent affections towards the agent; we wish him in return an adequate degree of pleasure and satisfaction, and approve of his receiving it. An equivalent pleasure or satisfaction thus desired and approved, in return for a pleasure or benefit received, is called a reward; and the person on whom we approve of its being conferred is deemed to be entitled to it; or, in other words, to *merit* or deserve it, or that there is a propriety in his receiving it.

901. *Merit* then consists in the title or right to a reward; and the action by which this title accrues, and the intentions that lead to it, are called *meritorious*.

902. Of actions that are *disapproved*, it is plain that what is above said is equally to be understood, but in a contrary sense; substituting *pain* for pleasure, and malevolent for benevolent.

903. *Demerit*, or guilt, then consists in a title or liability to pain.

904. The action of a being possessed of freedom, and sufficient intelligence to enable him to distinguish whether it be right or wrong, is called a *moral* action; otherwise it is merely *physical*. Hence the actions of infants, and many of those of idiots or madmen, are incapable of merit or demerit; but if a person, voluntarily and knowingly, puts himself or others in a state that deprives him or them of intelligence (as drunkenness,) it diminishes his guilt but in a very slight degree. The *morality*, or moral nature of action, requires these conditions.

905. An action is morally evil, if its motive, intention, end, or the means employed to attain even a good end, are disapproved as morally evil.

906. Where previous facts, or the necessary or probable consequences of actions require consideration and discussion, there the *judicative* faculty operates; but where the resulting rights or duties are weighed, on these the moral faculty decides.

907. Duties are either *perfect* or *imperfect*; they

they are perfect where the persons to whom they are due are known, certain, and determinate, and the extent or measure of the duty ascertained; the corresponding rights of the persons to whom they are due are then perfect: but where the persons to whom their performance is due, are undetermined, and the measure of the performance undefined, the *duties*, and also the corresponding *rights*, are imperfect.

908. Yet the total neglect of these imperfect duties must be disapproved; as, among their various objects, some may be selected, and the measure of performance should be proportioned to the abilities of the performer, and consistent with other duties: the perfect should always be preferred to the imperfect.

909. *Justice* consists in the performance of a perfect duty; therefore, it is the *right* of those to whom it should be done, if beneficial to them; or of society, if beneficial to it; and an *obligation* upon those who should perform it.

910. Justice is commonly divided into distributive and vindictive, to which we may add, *corrective* and *preventive*.

911. *Distributive justice* consists in giving to every one, that to which he has a perfect right.

912. *Vindictive justice* demands the infliction of adequate pain on him, whose actions are strongly disapproved, and therefore deserve punishment. See N° 900, 901, 902.

913. *Corrective justice* requires the infliction of such punishment for certain evil actions, as is deemed necessary for the amendment of the persons on whom it is inflicted.

914. *Preventive justice* consists in punishing offenders, with a view of preventing the innocent from being perverted by their example and impunity: and even of subjecting innocent persons to inconvenience, if afflicted with a dangerous contagious disorder, to prevent its extension.

915. *Law* is the just command of a rightful superior, duly promulgated, and to which obedience is due. It should be *just*, for if evidently unjust it is not a law, and should not be obeyed: but if its injustice be barely probable, obedience should be yielded to it.

916. Secondly, the superior should be right-ful,

ful, otherwise the command of a robber would be obligatory.

917. Thirdly, it should be known, as is evident.

918. Law is either *external* or *internal* : the external is that revealed by God in the canonical books of the Old and New Testament, and the municipal law of the country. The internal consists in the dictates of the moral sense ; for these spontaneously arising from the constitution of our intellectual faculties, and disobedience to them in many cases punished by the severe pain of remorse, must be derived from the Supreme Being, and consequently are the commands of a superior whose justice cannot be controverted.

919. Yet these dictates are liable to perversion, at the first dawn of our intellectual faculties, by those to whom our education is intrusted ; or may afterwards be misled by plausible arguments not sufficiently considered and compared with those that oppose them ; or by authorities in whom, in general, we have reason to confide ; or by passion, prejudice, or inattention. Such errors
are

are sometimes excusable in some degree, and sometimes not.

920. First, when the objects upon which the moral sense is to decide are intricate, involving rights or duties apparently opposite to each other; or resting on facts whose falsehood is not then known, and sufficient attention has been applied, its errors proceed from want of penetration or inculpable ignorance, and therefore are fully excusable.

921. Secondly, errors militating with the most simple dictates of the laws of nature, and obvious on the slightest cool reflexion, are inexcusable; nor can ignorance, and still less custom, long or universal usage, or any authority inferior to that of the Author of nature, afford a sufficient plea for their extenuation; indeed such ignorance cannot be supposed.

922. Thirdly, nor can the dictates of an erroneous conscience in any case excuse compliance with its suggestions when they urge to the commission of actions manifestly and immediately injurious, or to the infliction of punishment for mere speculative opinions or practices, neither shocking to humanity, nor dangerous

dangerous to society. Christ said,* that those that would put his disciples to death, would believe they thereby pleased God : could that exempt them from criminality, even allowing them to have acted under the authority of the Sanhedrim, the highest legal authority in their state? Motives much superior to any human authority, and sufficiently notorious, then existed, which should have deterred them from the commission of such atrocious crimes.

923. Nor can any state necessity ever so evident, and much less the probability of such necessity, authorize the privation of an innocent individual of his life, or even of his liberty, or any other right, without a compensation. The state maxim *salus populi suprema lex* does not extend to such cases.

924. All general rules are commonly denominated *laws*, thus the general rules which bodies observe in the communication of motion, are called the laws of motion ; but those general rules which our moral faculties observe in approving or condemning whatever

* John xvi. 2. See also 1 Corinth. xiv. 9.

sentiment or action is subjected to their examination, may much more justly be denominated such : they have a much greater resemblance to what are properly called laws which a sovereign enacts for the conduct of his subjects : like them they are rules to direct the free actions of men ; they are prescribed most surely by a lawful superior, and are attended to with the sanction of rewards and punishments. Those vicegerents of God within us, never fail to punish the violation of them, by the torments of inward shame and self-condemnation ; and, on the contrary, always reward obedience with tranquillity of mind, with contentment and self-satisfaction.*

925. *Virtue* consists in the practice of perfect and imperfect duties : its degree is measured by the difficulties that attend them, and bears an exact proportion to the efforts made to surmount them : the imperfect duties should not be practised at the expense of the perfect, nor these to the neglect of the imperfect.

* Smith's Moral Sentiments, Part. iii. chap. iii. p. 236.

ESSAY III.

OF THE EXISTENCE, AND ATTRIBUTES OF THE SUPREME
BEING.

CHAPTER I.

OF THE EXISTENCE OF THE SUPREME BEING.

926. By the Supreme Being is meant, the first of all beings, and from whom all other beings are derived, or in other words to whom they owe their existence: this Being is called *God*, or the *Deity*.

927. The existence of a Supreme Being is not an intuitive truth, that is, discerned as soon as the terms are understood; it requires the exercise of our reasoning powers to present it to the mind in its full force; but it is capable of being proved demonstratively, both *a priori*, and *a posteriori*.

928. A demonstration is a proof whose premises are self-evident, or which produces in us a conviction equal to that produced by self-evident premises. The existence of every
being

being different from our own (of which we are conscious) is known to us either by discerning the necessity of its existence from its nature, or from its causes; and as these are known prior to the inference of its existence, the proofs thus arising are called *a priori*: or the existence of a being different from our own is known to us by its effects upon us; and as these are subsequent to its existence, the proofs derived from them are called proofs *a posteriori*.

SECT. I.

A DEMONSTRATION OF THE EXISTENCE OF THE SUPREME BEING A PRIORI.

929. Since many beings now exist, some one or other of the following propositions concerning the duration of their existence must be true, as they comprehend every possible case.

First, *all* the beings now existing, ways existed.

Second, *some* of the beings now existing, have always existed.

Third,

Third, *one* of the Beings now existing, has always existed.

Fourth, *none* of the beings now existing, has always existed.

930. The first proposition is evidently false, for we are conscious that we ourselves have not always existed, and we are certain that neither the present or past generations of animals or vegetables have always existed.

931. The fourth is also false, for if *none* of the beings now existing had always existed, no being now existing could ever exist: for their present existence, since they do exist, must in that case have had a beginning; but this beginning would be impossible, as they could not give existence to themselves, and no other being, from whom they could receive it, is, (by the proposition) supposed to exist. A *beginning* implies a change from non-existence to existence; a *change* implies an action, and an action an agent: now that agent must be another Being which had no beginning, else the same impossibility would recur; therefore the fourth proposition is false, as its verification would require an impossibility, an action without an agent.

932. Therefore the third proposition must be true, as it exactly contradicts the fourth; and of two contradictory propositions, if one be false the other must be true.

933. But as the third proposition is not exclusive, its truth does not impeach the possible truth of the second, namely that some beings have always existed, and consequently, that at least two may have always existed; its falsehood however shall be shewn in the third section: in the mean time we shall suppose that one only being has always existed.

934. The non-existence of a Being which has always existed is absolutely impossible; for a Being that has always existed, can at no imaginable period of duration be supposed to have been merely possible, and consequently non-existing; now the non-existence of a being, which being cannot in imagination be supposed to have been merely possible (for any thing possible may be supposed), must be impossible; and if its non-existence be impossible, its existence must be necessary: and a being whose existence is necessary we call God.

935. This necessity is not merely ~~arbitrary~~ that

that is, merely inferred, from the existence of other beings, whose existence requires a cause, but it is *absolute* ; for if no other being had ever existed, this necessity (though in that case unknown to us) would equally subsist. What it arises from, or on what principle in the Divine constitution it is founded, we do not know ; but that it exists we evidently see, since we know its absence to be impossible: our ignorance of its nature affords no ground of disbelief, for we are equally ignorant of the nature of our own thinking principle, and yet we must believe its existence.*

Proofs a posteriori.

936. The proofs *a posteriori*, extend much further than those *a priori* ; for they do not barely demonstrate the existence of the Supreme Being, but also his power, intelligence, and wisdom, to a boundless extent.

First, we know that we ourselves exist, and

* Another and most ingenious proof, *a priori*, of the existence of the Supreme Being has been given by Dr. Hamilton, late Bishop of Orlery, in a particular tract published in 1789.

that our parents are only the occasional causes of our existence, but are totally ignorant of the mode of our formation and structure: these, therefore, must be effected by a Being totally foreign to us, and of a superior nature.

973. Secondly, we are conscious of a variety of states, viz. our sensations, affections, whether pleasurable or painful, and that we cannot produce the former, nor avoid feeling the latter by a mere act of our will; therefore we are not the *direct* causes of either: but as no state or modification can exist without an efficient cause, these modifications must be produced by a Being foreign to us, whose power is far greater than any we possess.

938. Thirdly, in the disposition and arrangement of that series of sensations which we call the works of nature, because they exist independently of our will, we find a connexion established betwixt our visible and tactile sensations, by which, as by an universal language, we are instructed how to act with respect to things distant and future, as well as near and present; consequently we have the same proof of the existence of the
Being

Being that communicates to us this instruction, that we should have of an invisible man that should instruct us by sounds; that is, speak to us and tell us how to act^e on different occasions. See N^o 470, 471.

939. Further, the works of nature, as they are called, whether animate or inanimate, exhibit such a wonderful display of intelligence, contrivance, and design, as render it impossible for an attentive and rational mind not to consider them as the effects of a Being possessing those attributes in a degree far exceeding any assignable or conceivable limits, and therefore justly deemed infinite. The instances are too numerous to be here detailed; an extensive, and yet much contracted, view of them may be had in Archdeacon Paley's excellent treatise of Natural Theology.

SECT. II.

OBJECTIONS.

940. Most of the objections to the existence of the Divine Being are grounded on the supposition

position of the existence of matter, which, atheists say, existed from all eternity, and is susceptible of infinite modifications and arrangements, during an infinite space of duration; and hence some, even Christian theologians,* denied that the existence of the Supreme Being could be demonstrated, and that it at most could be rendered highly probable.

941. But as it has been shewn, that matter itself is an ungrounded fiction, involving a contradiction, these objections require no consideration. I shall state only those that do not depend on this supposition,

942. In the first place, it is said, that no connexion can be discerned betwixt the will of one being, that another should exist, and the subsequent existence of that other; and that therefore the derivation of the latter from the former is *inconceivable*: and in truth, if abstractly considered, it is so; but it is not repugnant, and therefore it is possible, unless we take for granted, that whatever is inconceivable is also impossible, which is evidently

* See L'Hermizier, p. 37.

false : can we conceive the connexion betwixt the motion of one of our limbs and our will to move it? But, laying abstractions aside, the connexion betwixt the will of a Being whose power is infinite, and the existence of another being which he wills to exist, is easily discerned ; for if that other being be in itself possible (and its existence shews it to be possible) it may well be produced by a power that knows no bounds, but those of possibility : whereas the production of motion, by the sole act of our impotent will, is truly inconceivable. The antient maxim, *ex nihilo nihil fit*, is not applicable to infinite power.

943. Some atheists deny the necessity of inferring the existence of one unoriginated being, in order to account for the existence of all other beings. They tell us there exists an infinite succession of beings, each of whom derived its existence from preceding beings, as these did from others anterior to them, in an endless progression, and yet that the whole succession exists necessarily : and thus they think, that though each link or branch of the succession was produced, yet that the whole was unproduced.

944. But, in the first place, a succession actually infinite, whether unoriginated or actually endless, is impossible, as has been elsewhere shewn.

And secondly, if each link or branch of the succession were produced, the whole, that is, all the branches, must have been produced; for what is the whole but the collection of all the parts?

945. Nor does it avail to say, that many things may be affirmed of each of the parts of which a whole consists, which cannot be affirmed of those parts considered in the aggregate and collectively. Thus the parts of which a whole consists, taken singly, may be invisible, or nearly so, and yet, taken collectively, they may be perfectly visible. The observation is certainly just with respect to properties that are susceptible of increase. The minute particles of bodies may be nearly invisible if taken separately, because they do not reflect a sufficient quantity of light; but when collected and joined together, they reflect more light, and therefore the aggregate is more visible; but where the properties are unsuceptible of incr

no alteration by their aggregation. Thus, as each man in any multitude of men was born and must die, the whole multitude was born and must die. Now production is a property of this sort; each of the parts, of which the infinite series is alleged to consist, is allowed to have been produced, therefore the whole must have been produced. Where then could the necessity of its existence reside? No where; therefore it is a pure chimerical fiction.

SECT. III.

OF THE UNITY OF THE SUPREME BEING.

946. First, we have no proof of the plurality of Gods, nor is there any reason to suppose it.

947. Secondly, if there were more than one God, there might be an infinity of gods, which seems absurd; for to suppose even two beings existing independently of each other, that is, having separate existences, and yet both to exist necessarily, involves a contradiction; for if the existence of each is independent of that of the other, and perfectly unconnected

connected with it, then the existence of one of them separately from that of the other, is perfectly conceivable and intelligible; therefore the non-existence of the other may be supposed; therefore it is possible; (for what is impossible may be admitted in argument, but cannot be supposed, being unintelligible;) therefore its existence is *not necessary*, which contradicts the supposition of its necessity.

948. Thirdly, to suppose two beings having exactly the same properties, so that it is impossible that one should have what the other has not, is to suppose that they differ in no respect whatsoever; therefore there is no ground for their distinction, therefore they are in reality *not two, but one*.*

CHAPTER II.

OF THE DIVINE ATTRIBUTES.

949. The Divine attributes are such properties and dispositions as are inherent in his nature. (See § I. *Introduction*.)

nature, and necessarily inferable from it. They are either *absolute*, as they exist independently of the existence of any created being, such as omniscience, intelligence, wisdom, omnipotence, liberty, and immutability; or *relative*, requiring for their existence the existence of other beings. Of the former I shall treat in the first section, and of the latter in the second.

950. We must remark, that we should attribute to the Supreme Being every power and disposition which we ourselves esteem laudable and advantageous, as they are all derived from him, and in him free from the imperfections that attend them in us, consequently both the manner and degree in which he possesses them is infinitely superior to that in which we possess them,

SECT. I.

OF THE ABSOLUTE ATTRIBUTES.

Omniscience.

951. Omniscience consists in the knowledge of all things possible. All these may be brought

brought into existence, and therefore all must be known. An immense number of spiritual substances, of different characters, receiving similar sensations and ideas, or at least capable of receiving them, have already been brought into existence, and many more are still future, which are as well known to the Supreme Being as the present, and the past as the present.

952. Of the future events some are *necessary*, being results from pre-established laws, but some are *contingent*, being the free determinations of the human will, and depending solely on the agent, who is their author; for these, rational beings are accountable, entitled to reward or liable to punishment.

953. The determinations of the will can alone be deemed free, for the events or actions subsequent to those volitions necessarily result from the laws which regulate the power which the will exercises over its ideas, and the sensations which constitute the human body.

954. The neglect of distinguishing the volitions from the subsequent actions has occasioned much controversy.

955.

955. The difficulty of explaining how free volitions can be foreseen is such, that some philosophers have denied such foreknowledge, judging it incompatible with the freedom of determination; such volitions being perfectly unconnected with any thing on which foreknowledge may be grounded. Others, sensible, both from reason and revelation, that future actions are foreseen, deem the volitions, which are the occasional causes of these actions, to be themselves the necessary effects of antecedent causes, and as such may be foreseen.

Others, with whom I agree, allow the freedom of volitions, and deny its incompatibility with the foreknowledge of it by the Deity, though the mode in which this knowledge is acquired is inexplicable; for as it results from his essence, which is incomprehensible, it can bear no analogy to our mode of acquiring any knowledge, and therefore is necessarily unknown. All that can be required from those that acknowledge such prescience, is, to shew that it is neither incompatible with human liberty, nor impossible.

956. The truth of a proposition does not require the actual existence of its object.

That

That Alexander vanquished Darius is now true, though neither Alexander nor Darius now exist; in the same manner a proposition announcing a future object, does not require the actual existence of that object; all that its truth requires is, that the object should exist in some subsequent period. It is quite equal, whether the existence of the object be necessary or contingent; all that the verification of the proposition requires, is, that the object predicted should really happen. If it does, the prediction is necessarily true, though antecedently to its happening the object were contingent; thus a free volition may exist, though previously to its existence it were contingent, that is, the agent had the power of not producing it, as well as the power of producing it.

957. In the same manner, the foreknowledge of God is equally infallible, whether its object be necessary or contingent: all that its infallibility requires, is, that the object should *really* exist, as foreseen. Hence the truth of this foreknowledge, that is, its correspondence with the *real* existence of the object, is necessary, though the object itself, previous to its actual existence, be merely contingent. This
foreknowledge

foreknowledge does not in the least affect the contingency of the object, that is, the power of the agent to produce it or not produce it, (for it is perfectly extrinsic to it,) no more than our view of objects before us interferes with their existence ; though we cannot reason from our actual sight to God's foresight ; for an object actually seen necessarily exists, otherwise it could not be seen ; but an object foreseen does not exist, and therefore its future existence, though certain, is not necessary, as the agent, previous to its existence, has the power of not producing it. ?

958. By attending to these principles we may extricate ourselves from that labyrinth of difficulties which many think insuperable ; the most embarrassing of these are perhaps the following.

959. If a free agent has the power of abstaining from the commission of an action, which it is foreseen he will commit, he must have the power of deceiving the Divine pre-science, for if he does abstain from that action he actually falsifies it ; therefore, if he has the power of abstaining from it, he has the power of falsifying it.

and

960.

960. To this I answer, that the power of deceiving the Divine prescience is not involved in the power of ~~abstaining~~ from the action foreseen, and therefore, though the agent should really abstain from it, he would undoubtedly falsify the Divine prescience; yet his having the power of abstaining from the action, is not equivalent to his having the power of falsifying the Divine foreknowledge; for when we suppose that the action will *really* happen, we cannot at the same time suppose, that it will not happen, for that would involve a contradiction, namely, that it would happen, and yet not happen; now what cannot even be supposed is impossible; and since the supposition of its being foreseen, includes the supposition of its happening, the supposition of its not happening being contradictory thereto is inadmissible, and therefore the falsification of the Divine prescience is impossible, though the agent has the power of abstaining from the action; for it is supposed that he will not exercise that power.

916. Some have said, that truth being a relation, it must, like every other relation, have

have a determinate foundation ; but future contingent objects afford no determinate foundation upon which a relation can be grounded, as they are totally unconnected with any cause whose connexion with them could afford a foundation for the truth of the propositions that announce them ; therefore no proposition concerning them can be true.

962. But it is answered, that propositions announcing a future object require no foundation for their truth previous to the existence of their object ; if the object exists at the time they predict its existence, that is sufficient to render them true ; the foundation of their relation being no other than the *reality* of the future existence of their object, they are true before the object exists, because it will *infallibly* exist. Note, the propositions here mentioned are supposed to be singular, one of which must be true and the other false. For universal or particular propositions announcing a future contingent object may be false.

Of the Divine Intelligence and Wisdom.

963. Intelligence consists in the knowledge
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of all the possible arrangements of beings and their modifications.

964. *Wisdom* consists in the choice of the best possible arrangement, or at least of one of the best arrangements. By *best*, I understand that most suited to the most approved design.

965. That we must ascribe both these properties to the Supreme Being, is evident, from the contrivance and mechanism of the universe, as far as we are acquainted with it, upon paying any attention to its structure; and the more minutely it is considered, the more proofs of these attributes are discovered. See Paley's Natural Theology throughout.

Of the Divine Omnipotence.

966. The power of the Supreme Being is evident, since he being the only self-existent Being, all other beings must have been created by him, all their powers derived from him, and regulated by his laws; and as his power relates to all *possible* things, we must deem it boundless, that is, infinite.

967. With respect to this power two important questions have occurred; First, whether

ther the power of creation can be communicated by the Supreme Being to any other created being? and, secondly, whether the whole system of created beings be the most perfect, or one of the most perfect possible?

968. As to the first question, some think that a creative power may be bestowed on other beings, because they discern no repugnancy in the communication of such power.

969. Yet it appears to me, that this power is incommunicable to any creature; First, because it is the greatest that the Supreme Being himself possesses; namely, that another being should exist, merely because he wills it to exist; or that it should cease to exist, because he wills it should so cease. The connexion betwixt his will and the existence of another being is intelligible, because he is omnipotent; but the connexion betwixt the will of a being that is not omnipotent, and the existence of another being, is unintelligible; and if any connexion be established between them, as it may, the will of the created being is only the occasional, and not the efficient cause of the being he wills to exist. I say occasional, *not instrumental*, for creation is

not a mechanical operation that requires an instrument.

970. As well might the power of creating all beings, or omniscience, be communicated, and thus a perfect equality with the Supreme Being in those respects exist, which seems as impossible as the plurality of gods.

971. The second question, namely whether the present system of created beings be one of the most perfect possible, is perhaps one of the most important that ever occupied the attention of mankind. If decided in the affirmative, its resolution will afford a complete answer to the most perplexing difficulty that occurs in Natural Theology; namely, why evil is admitted into his creation, by a Being infinitely wise, infinitely good, and infinitely powerful; for if the present system be the most perfect possible, or at least one of the most perfect, then, since evil is evidently included in it, its admission must contribute to its perfection, and therefore could not be excluded, without detracting from the perfection of the system, and all that can be required is, that its quantity be the smallest compatible with the perfection of the system.

972. But if this question be decided in the negative, (as it is by many) then no satisfactory cause for the admission of evil can be assigned: its existence, and that of these attributes, cannot be reconciled, as Bayle seems to me to have proved beyond contradiction. The answers made to him, even by Leibnitz, appear unsatisfactory.* Its existence is commonly said to be a mystery, but that it exists cannot be denied; it is therefore the existence of the Divine attributes that in this hypothesis is rendered mysterious, or rather impossible; for if these are irreconcilable to evident evils, they cannot exist together in the same system.

973. Before we enter on the merits of this great question, and demonstrate the perfect agreement of these attributes with the existence of evil, other questions still more general, but leading to its solution, must first be examined. First, why God has bestowed existence on any other beings?

* See Theodicea, N° 118, 119, 120, 121, 122. 133, 134. 161, 162. 236, 237. 266. Paley, 527. Doddridge's Lectures, p. 184.

Secondly, was he free to bestow it, or not bestow it, at his pleasure ?

Thirdly, did, or do, all possible beings possess the same characters ?

Fourthly, shall all created beings be finally so happy as to prefer existence to non-existence ?

974. In answer to the first question, some* have asserted, that God acts without any motive, but merely because such is his pleasure. Such conduct, however, rather befitting a fool, a tyrant, or a madman, it would be impious to ascribe to the wisest of all beings.

975. Others say, that God created the universe for his own glory; a motive infinitely too feeble to effect a being so far exalted above his creatures, of whatever rank they may be. A motive of that sort may be useful to mankind, as it stimulates them to actions advantageous to society, but is unworthy of a being so much superior to all those from whom he could receive it; and though it is commonly said, that the world was made for the glory of God, yet as Abp. King justly remarks, this

* Hook, Princip. Reb. Natur, 328.

is said *humano more*, and is attributed to God as *anger, revenge, eyes, and hands*, are attributed to God.* Sooner, as Balguy remarks,†
 “ might an angel propose to himself the ho-
 “ mage of a worm ; when we are required
 “ to glorify him, it is partly because it is right
 “ and good in itself, and therefore morally
 “ good ; and partly because it is essential to
 “ our own happiness.”

976. Others endeavour to persuade us that God created all beings for the manifestation of his own attributes; but this differs in nothing from the last-mentioned motive, for it is only from the manifestation of his attributes that glory can arise.

977. The only adequate motive that can be assigned for the creation of our system, by a Being whose happiness is perfectly independent of its existence, is the communication of happiness to all the creatures capable of receiving it. In effecting this most adorable purpose his power, his goodness, and his wisdom, are displayed in the manner most worthy of his

* King on the Origin of Evil, p. 54. † Tracts, 221.

Supreme perfection.* This is not contradicted by revelation: the passage in Proverbs xvi. 4. is shewn by Dathius to be falsely translated; it should be *God procures all things for his adorers.*

978. In answer to the second question we must observe, that a being is free, who is impelled by no preponderating motive either to will or not will effecting a given action: such freedom the Supreme Being possessed when he willed the existence of other beings: his happiness being independent of their existence, could receive no addition from theirs; his goodness alone induced him to seek it: but this motive could not necessitate him to procure it, it being counterbalanced by the knowledge that his own could receive no increase from it; yet he cannot be said to have acted without a motive, as the happiness of his creatures was a sufficient though not a preponderating motive, and consequently could not detract from his freedom.

979. With respect to the third question, we may infer from daily experience, as well as from all history, that no two individuals of

† Smith's Moral Sentiments, Part III, chap. III. p. 237.
Aquinas, 1 P. Quest. 44. Art. 4.

the human species have exactly the same mental temper, disposition, and character, any more than exactly the same features and countenance: they differ from each other, and approach more or less to the perfectly virtuous or extremely vicious by infinite gradations. These dispositions are inherent in their nature, and form what is called the principle of their individuation; but they are not so essential as to be absolutely unchangeable and unimproveable. All that exist are more or less amendable. Many characters are undoubtedly possible that are absolutely incorrigible, but these I think are never brought into existence, as they would necessarily be permanently unhappy.

980. It were vain to say that God might make all men or other beings equally perfect or equally corrigible; he undoubtedly may create an indefinite number of such beings, but these would not comprise all possible men or other beings; those that are corrigible in various degrees would still remain possible, quite distinct and different from the former; and with such intelligent beings as these we actually find this globe peopled,

981. The fourth question must in my opinion be answered in the affirmative, for it seems unworthy of the Supreme Being, and inconsistent with his goodness, justice, and wisdom, to bestow existence on beings who are to be eternally miserable, and to whom existence must consequently be eternally a curse. It is indeed commonly said, that they are themselves the authors of their own misery ; but this does not lessen the inconsistency of its never-ending duration with his paternal and infinite goodness, since their existence was no way necessary, and it was foreseen that it would terminate in endless misery ; nor with justice, since they could not obtain existence upon those terms, but if possible to be proposed to them, would certainly refuse it; nor with infinite wisdom, since their misery would be absolutely useless, both to themselves and to their Maker.

982. Hence it appears to me, that all intelligent beings brought into existence, and having dispositions more or less difficultly amendable, will finally be rendered more perfect ; their moral dispositions amended and brought into such a state of happiness as their

their respective natures are capable of receiving.*

983. We now come to the solution of the principal question, namely, how it happens that evil is not excluded from his creation by a Being of infinite power, goodness, and wisdom ; for, supposing this system to be the *best*, or one of the best possible, yet supposing this world to be peopled, as we find it to be, by free and imperfect intelligent agents, evil could by no possibility be excluded from it. For if it were peopled only by beings that require no amendment (and other globes may possibly be so) then beings more imperfect should be supposed impossible, which appears evidently unreasonable, as in this hypothesis numberless beings capable of happiness would eternally be excluded from it.

984. To shew the impossibility of this exclusion more distinctly, we must state the different heads to which all are reducible. These are evils of natural imperfection, called *metaphysical* evils, *physical* evils, and *moral* evils.

985. *Evils of imperfection* are essentially inherent in all creatures ; for not being capable

* See Hartley on Man, Part II. chap. iv. sec. 5.

of infinite perfection, they must always remain imperfect, relatively to superior degrees of it; the degrees of imperfection must be various; all corrigible beings must belong to this class.

986. *Physical evils* are all reducible to *pain*, whether of body or of mind. Such intelligent beings as inhabit this globe being all supposed corrigible, must be more or less imperfect, otherwise they would require no amendment; now the principal means of their improvement is the endurance of pain, whether corporal or merely mental; a being who supports it with resignation, from a consciousness of his duty so to do; who suppresses the impatience, vexation, and frequently the anger, indignation, grief, dejection or despair, it tends to excite, necessarily becomes an object of approbation in a higher degree than he could be previous to such discipline, or in other words acquires a higher degree of perfection. Thus the endurance of pain is a necessary ingredient in the practice of virtue, and the practice of virtue being the path of amendment, hence the necessity of pain.*

* Stewart's Outlines, sec. 277. 284,

987. As the patient endurance of *pain* in the performance of duty, is the essence of moral perfection, so its avoidance, when its endurance is a duty, or the inordinate acquisition of its opposite *pleasure*, forms the essence of moral imperfection or turpitude ; to abstain from this, when strongly coveted and such restraint is a duty, must be considered as a grievous pain.

988. To avoid the pain of reflexion, the generality of mankind neglect inquiring into the duty they owe to the Supreme Being ; they rest satisfied with their parental and national institutions : hence the criminality of polytheism, idolatry, and superstition, is derived.

989. In the distribution of pain, whether of body or mind, we generally discover traces of the most profound wisdom ; it is the almost inevitable consequence of intemperance ; and, whatever outward appearances may suggest, the inexorable attendant of crimes and vices, and frequently of folly. Its manifestation serves also to deter others from similar misconduct.

990. To the doctrine here advanced many objections

objections have been made ; First, it has been said, that the infliction of pain frequently fails of effecting that amendment, for the production of which we have said it was designed. This cannot be denied, as far as relates to the present state of our existence ; but since our duration is not limited to the present state, since we see that in this state amelioration of temper and character frequently results from the discipline of pain, have we not reason to think, that its infliction continued in the next life, and probably increased, will at last be attended with its proper effect, and make even the most obdurate sensible, that the abandonment of vice, and the practice of virtue, can alone procure and establish their happiness. Nor ought we to suppose that if this doctrine were true it would have been revealed, for its revelation would infallibly lead many to defer their reformation to a future period of whose misery they can form no idea, and thus be productive of mischief: mankind at the different periods in which revelations were communicated, was not sufficiently enlightened to receive truth in its full extent.

991. Again, we are told, that brute animals,

mals, though incapable of any moral action, and consequently of any change, amendment, or moral reformation, are nevertheless subjected to pain ; consequently moral reformation cannot be the purpose of its infliction, nor afford a reason for its existence.

992. This train of reasoning is grounded on the supposed certainty, that these animals really suffer pain, and are capable of perception and passions ; in attributing perception to them, we argue solely from analogy in contradiction to the most evident principles ; but I appeal to every impartial mind, whether this analogy be not by far too feeble to support a conclusion attended with inextricable difficulties : does it not argue the most extravagant presumption to assert, that the Divine omnipotence cannot form machines capable of performing all those actions from which we conclude them to possess intelligence ? I say intelligence, for if we allow them perception, we must allow them abstract notions and reasoning to a certain degree ;* and if such machines be possible, why should we not conclude them to exist, rather than contradict the

* Cooper's Tracts, p. 293, &c. Norgate's Essays, p. 28.

primary maxim of natural religion, that *under a just God it is impossible an innocent being should suffer without any reason or compensation*, which must be the case of brutes, to which we deny a future life, and thus furnish materialists with their strongest argument? The same analogy that leads us to attribute perception to the more perfect animals, whose structure most resembles our own, would equally lead us to attribute it to insects, whose internal structure differs most from our own, and even to microscopic animalculæ; nay, it has induced many to attribute it to vegetables: thus also the motions of the planets were anciently attributed to presiding spirits, and thus most probably idolatry originated; thus, while attending to mere sensible appearances, other intellectual and much stronger principles of reason are neglected or rejected: no sort of folly is too gross to be credited.

993. Lastly, if it be true, that the punishment to be inflicted in the next life for crimes committed in this, are never to end, it is evident that pain is not admitted into our system merely for the purpose of correction and amelioration, but principally for the purpose of producing

producing endless misery. A purpose so repugnant to infinite goodness, as the production of infinite misery, and to infinite wisdom, as the infliction of misery which must be useless, (since it is supposed to work no reformation in those who suffer it, and cannot by its example tend to reform others, since it is invisible;) and to infinite justice, since it is supposed inflicted on those who could not have the choice of receiving existence with the chance of being exposed to it, cannot surely be credited; and in effect the conduct of those who pretend to believe it, evidently shews they do not in reality credit it. “ Justice consists in
 “ the constant and immutable will to dis-
 “ pense to every one that which best cor-
 “ responds with his moral state; its exercise
 “ will therefore be varied with the diversified
 “ situations in which its objects are placed,
 “ and the different characters they bear; the
 “ evils of the present life are universally al-
 “ lowed to be intended for correction and
 “ amelioration; if the object of future
 “ punishments be different from this, if they
 “ have no other end but the misery of the
 “ sinner, all analogy is lost, the nature of
 VOL. I. I I “ man

" man must be changed, and he must be-
 " come for ever incapable of repentance and
 " amendment; and who renders him so?
 " God; God proved to be infinitely good,
 " yet good only for a moment, but eter-
 " nally implacable; it is sovereignly impro-
 " bable, that the mere circumstance of time
 " should be attended with such a revolution
 " in the character of man or the conduct
 " of God." * It is impossible that God should
 be *infinitely* implacable, and only *finitely* mer-
 ciful, when his mercy is expressly declared to
 be above all his works, Psalm cxliv. 9.

994. But it is said, that the enormity of
 every offence increases with the dignity of the
 person offended: as sin is an offence against
 the infinite majesty of God, its malignity must
 be infinite, and therefore deserves infinite pu-
 nishment. This argument is in every respect
 fallacious, being grounded only on what takes
 place in human offences; among men, the
 higher the dignity of the person offended
 above the offender, the more he is hurt, and
 the keener the resentment he feels, or at least
 others feel for him; for if he is magnanimous,

* See Petitpierre, in the Analytic Review for Oct. 1788.
 he

he will feel no other sentiment but indifference or contempt; but the Supreme Being is incapable of being hurt by any offence, and can possibly feel no resentment, as this is essentially a painful sensation.* Besides, the greatest offenders scarce ever think of God, while committing their crimes, and have no direct intention of offending him. Moreover, if this reasoning were just, even the most trifling transgressions would deserve infinite punishment, which is too absurd to be credited.

995. Nor is revelation so favourable to the opposite doctrine as at first sight it would appear to be; *eternal* punishments are indeed denounced, but the word *eternal* does not always in the Scriptures signify *endless*, but frequently an indefinite duration. See Wakefield's Notes on Matthew, p. 358. And Burnet de Statu Mort. and Resurg. 246. It is applied to things which we are expressly told will have an end. Thus the kingdom of Christ will, it is said, be *eternal*, Dan. vii. 13, 14; and yet we are expressly informed, 1 Corinth. xv. 24. that it shall have an end.

* Lobb. see 114.

But it is asserted that since in Matth. xxv. 46, the word *eternal* denotes the endless happiness of the just, it must in the same sentence be taken in the same sense, when applied to the punishment of the wicked. Yet this is not a necessary consequence, for, to say nothing of the reasons for taking it in a different sense, in the sentence of condemnation, nothing is more common in the Scriptures than employing the same word in different senses in the same sentence; this licence is by grammarians called *antacclasis*, or *refraction*, and many examples of it are given by Glassius, p. 959. Grotius mentions it, 1 Corinth. viii. 3. Quintilian explains it, Instit. Orat. ix. 3. And on the contrary we are told, Psalm cii. 9. that God keepeth not his anger for ever, and that in judgment he remembereth mercy. In Daniel ii. 44, we have a perfect *antacclasis*, for in the preceding verses, *kingdom* denotes an earthly kingdom, but in the 44th a *spiritual*.

996. *The origin of moral evil is clearly deducible from the free agency of man; considering him as a perfectible being, deriving improvement from his own exertions, he must have the power while acting conformably to*
the

the suggestions of his duty, to act also in contradiction to them ; if either alternative were equally easy, no difficulty could be overcome ; consequently no virtue practised, and no merit acquired ; hence the present state of man, in which he is solicited by various allurements to deviate from his duty, or obliged to struggle with various difficulties in its performance, was absolutely necessary for his advancement in perfection and amendment of character. Now wilful deviation from a known duty, constitutes the very essence of moral evil ; the possibility then of such evil, or rather liability to it, was preordained, but not its actual existence ; this is barely permitted, as the indubitable consequence of freedom of action ; for in any state in which imperfect, but amendable beings could be placed, amendable by overcoming difficulties in the acquisition of rectitude, deviations from it must be expected, and therefore permitted ; all that Supreme wisdom can effect, is to place such beings in that state, in which, freedom being still preserved, the sum of the resulting evils is smallest, the quantity of moral improvement greatest, and in which, as far as possible, evil

is made to contribute to the production of good. Now that this is the case in our system, we have reason to presume, and can even in many instances prove : hence we cannot say as some have unwisely said, that *whatever is, is right* ; on the contrary *much of what is, is wrong* ; but we may well say, that the *permission of whatever is, is right* : evil is indeed rendered productive of good, and one evil frequently serves to correct another, or even to prevent a greater ; but it is still evil, for it would be still better if men would so use their liberty, as that no evil at all should exist.

A succinct, but beautiful view of the reasons why evil is admitted is given by Hook, in his *Principia Religionis Naturalis*, vol. I. p. 292, which I shall here annex.

“ Sed sunt etiam mala ; at qualia ? Quæ
 “ non in ipsa rerum machinatione destinata
 “ videntur tanquam ipsius finis proprius :
 “ verum ex materiæ imbecillitate, inferiorum
 “ agentium errore, eveniunt juxta eas
 “ leges, quæ omnino sunt utiles, & necess-
 “ sariæ. Mala sunt ; sed sine quibus nullæ
 “ essent leges generales ; quæ leges tamen
 “ necessariae

under the control of the will, and manifested only on proper occasions, constitutes an admirable power: yet that it borders on insanity we have the testimony of the poet:

Great wit and madness sure are near allied,
And thin partitions do their bounds divide.

And a remarkable instance in Tasso. But when this rapid succession of ideas is ungovernable by the will, when the ideas themselves are incoherent, the transitions sudden and unconnected, some degree of insanity is apparent.

806. To an imagination more or less disordered, we may attribute religious enthusiasm, fanaticism, superstition, and the rejection of reason in religious subjects.

807. *Religious enthusiasm* consists in a strong, but ungrounded, persuasion of an uncommon favour and communication with the Deity: it is susceptible of various degrees, but its extreme and most violent degree is *fanaticism*; which impels the enthusiast to commit the most frantic actions, often the most atrocious crimes, and embrace the most senseless, and even immoral tenets.

808. *Superstition* is a groundless persuasion of the supernatural efficacy of certain practices, words, or actions, and of the connexion of certain natural phænomena with future events, whether moral or political, as omens, augury, &c.

809. *The rejection of reason on religious subjects.* This some enthusiasts still contend for, particularly in the interpretation of the scriptures, as if we should expect a miraculous assistance, without any solid reason for expecting it: whereas, it is reason, and reason alone, that convinces us of the existence of the Supreme Being, and the truth of the Christian religion; and equally enables us to interpret the books in which it is contained, in all cases where that knowledge is necessary, and to reject any interpretation contrary to it.*

810. The delusions or mistakes arising from a depraved or misguided judgment are numerous; but in general we may remark, that where in any important subject the strength of conviction exceeds the strength of the

* The rejection of reason involves a contradiction, for if we ought to reject it, it is reasonable that we should reject it; therefore it is not rejected, but still remains.

proofs on which it rests, there some degree of insanity is apparent.

811. Among many kinds of a perverse judgment, I shall select the following : observing, that they amount to insanity only when accompanied with a full persuasion of their truth, or the solidity of their foundation ; *ungrounded notions, unreasonable suspicions, overweening presumption, visionary schemes, erroneous estimation of probabilities, blind attachment to prejudices, absurd rules of interpretation.*

812. *Ungrounded notions.* These regard either the past, the present, or the future ; among those that relate to the past, we may reckon the wild system of Epicurus, and many other such systems ; among those that relate to the present, is the opinion of the transmigration of souls from one body to another, and that the ancient patriarchs are now living ; and as to those relative to futurity, the most remarkable is the opinion of the speedy approach of the millenium, and reign of Jesus Christ on earth ; and among the ancients, the heathen Romans expected the extinction of Christianity to take place in the year 398 ; and Christians generally expected the

the end of the world about the year one thousand.

813. *Unreasonable suspicions, fears, and scruples.* Of such suspicions, Bayle says, “among the several epidemic distempers of the human mind, I know of none more productive of bad effects than the practice of giving reins to suspicion. We easily pass from one suspicion to another; we seldom stop at possibility; we run forward to probability, and to the greatest probability, and presently after, that which passed only for probable, is reported as certain and incontestible. Great cities are more subject to this disorder than others.” Thus Arminius having undertaken a journey to Italy, it was presently after believed all over Holland that he had kissed the Pope’s toe. Such suspicions are generally entertained by tyrants of the best and most virtuous of their subjects: the celebrated J. J. Rousseau became a victim to them.

814. *Overweening presumption.* Such was that of the stoicks, who were persuaded that in wisdom men could equal the Gods; and that of the Greeks, who supposed themselves superior to all

all other nations, whom they deemed by nature destined for slavery ; and that of the modern revolutionists, who thought themselves superior to all other nations in political wisdom, of which they were completely bereft. They fondly imagined they could render the world happier, by the destruction of Christianity, and even that they could effect it.

815. *Visionary schemes* ; such as that of converting base metals into gold, of finding an universal remedy for all disorders, of discovering futurity by the various arts of divination.

816. *Erroneous estimation of probabilities*. I allude not merely to the faulty manner of calculating them ; such as that of Mr. Hume, in his Essay on Miracles ; nor to that of a celebrated calculator, in his answer to that essay ; nor to that of Dr. Halley ; in estimating concordant testimony ; but principally to an erroneous determination of them, or their unnatural adjudication ; for instance, the attribution of extraordinary events to causes inadequate to their production, as Mr. Gibbon and others have done in accounting for the origin and progress of Christianity : or the attribu-
tion

tion of ordinary events to unusual causes or motives, when ordinary causes or motives are sufficient, and no proof but vague suspicions of the existence of any other; for instance, the death of princes to poison, various disorders to magick, &c. But in general this erroneous judgment proceeds from our hopes and wishes, or from our fears, and not unfrequently from prejudices, party spirit, jealousy, and malignity.

817. *Overweening attachment to prejudices.* This prevents the Mahometans from examining the foundation of their religion, and many infidels from examining the proofs of Christianity: hence also the bigotry of the various Christian sects.

818. *Absurd rules of interpretation,* such as that the literal sense should always be deemed true, though apparently contrary to reason, or contrary to the general tenor of the writing; or taking words in a figurative sense, which may consistently be taken in the literal sense: by *absurd*, I mean glaring opposition to known truths.

819. Locke remarks, that madmen resemble those that argue justly from wrong principles;

ciples; their madness is frequently merely partial; being confined to one point; on every other they may reason pertinently, and even on that their reasoning is perfectly just.* Of this we have a signal instance in the person of the celebrated Harrington, author of the *Oceana*, who imagined his animal spirits transpired from him in the shape of birds, flies, or bees; and argued so strenuously that this was no depraved imagination, that his doctor was put to his shifts for an answer; yet, on other subjects he could discourse as rationally as any man.†

CHAPTER VI.

OF THE ORIGIN AND DEGREES OF HUMAN KNOWLEDGE.

Knowledge being founded on sensations, ideas, notions, or their relations, their origin is first to be considered: the origin of these has indeed already been mentioned, but many think them innate, which I shall now briefly examine.

* B. ii. C. xi. sec. 13.

† British Biography, vol. v. p. 405.

SECT. I.

OF INNATE IDEAS.

820. By *innate* is meant, imprinted on our minds, and coeval with our existence, or at least with our birth; and by *ideas* I mean the feeble copies of our sensations. Now that we are affected with no sensations at our birth, but those of feeling, taste, and smell, is very apparent, and of such sensations scarce any ideas can be retained, even when those sensations are received at a maturer age. That the ideas of sight and hearing are not innate, but derived from our sensations, is very evident, since those who never received those sensations, as those born blind or deaf, have no ideas of colours or sounds.

SECT. II.

OF INNATE NOTIONS.

821. It is also true, as Locke justly asserts, that we have no innate knowledge of even the simplest speculative truths; such as *that what-*
ever

“ necessariae sunt, ut locus sit consilio, pru-
 “ dentiae & industriae, ut homines rationes
 “ suas possint instituere & ex certis actionibus
 “ certos sibi polliceri effectus & consequen-
 “ tias. Mala sunt; at sine quibus abessent
 “ commiseratio, beneficentia, liberalitas, for-
 “ titudo, æquanimitas, patientia, lenitas, &
 “ officia omnia gratuita, quorum sensus longè
 “ est omnium lætissimus & memoria jucun-
 “ dissima. Quis omnem sublatum vellet do-
 “ lorem quo de pravo corporis habitu admon-
 “ emur, aut laborem, ad sanitatem & vires
 “ corporis animique tam necessarium? Quis
 “ contra naturæ studia tantùm obduruit, ut
 “ illos sensus nostros, licet molestiam quan-
 “ doque ferant, vituperet, quibus aliorum in-
 “ fortuna deploramus, quibusque ad opem
 “ ærumnosis ferendam incitamur; aut illum
 “ animi morsum sive angorem, quo elidimur
 “ ex criminum nostrorum aut culparum con-
 “ scientia; & quem vitiorum medicinam esse
 “ voluit benignus Deus? Mala sunt; sed non
 “ totum rerum ordinem cogitatione com-
 “ plectitur humana mens. Exigua est hæc
 “ mundi pars, quam cernimus, & pro brevi
 “ temporis spatio; si plurima ergo in hoc

“ ævo mala magnas afferre videamus utili-
 “ tates, scill quod hominum scelera sæpif-
 “ fismè cohibeant & impedian, proborum
 “ virtutes exerccant & augeant; hominum
 “ mentes à rebus externis & vilioribus volup-
 “ tatibus ad interna & vera bona convertant;
 “ hinc certé fit verisimillimum, ea etiam
 “ mala (liqua sint) quorum nullum nunc cer-
 “ nimus usum, ad totius systematis in par-
 “ tibus à nobis remotioribus aut seculorum
 “ futurorum felicitatem & perfectionem fu-
 “ isse destinata: ex ùs certe neutiquam ef-
 “ ficitur mundi administrationem esse invi-
 “ dam aut malignam.”

Of the Divine Liberty.

997. *Freedom from constraint* being the na-
 tural consequence of perfect independence
 must naturally belong to the Supreme Being;
 so also must freedom, from a necessity arising
 from his own nature, if his happiness be com-
 plete, independently of any exertion of his
 power; and this we must judge it to be,
 otherwise the existence of created beings
 would be as necessary as his own, and equally
 eternal,

eternal; as in that case the exigency of his nature would eternally require their existence. Now the supposition of their eternal existence evidently involves an impossibility; for creation being the production of a being from nothing, an instant must be supposed in which it did not exist, therefore it cannot be said to have had no commencement, nor consequently to have been eternal.

998. It may be objected, that the determination to create being eternal, it cannot be said to have ever been free, as no instant can be imagined in which it did not exist; but it is answered, by allowing that the objection clearly disproves the pre-existence of freedom as a *state* preceding election, but not its existence as a *mode* eternally accompanying election and inherent therein: in this respect Divine liberty differs from human; for among men, freedom and frequently suspense precede a free determination, but do not accompany it.

Of the Divine Immutability.

. The immutability of the

Being

Being consists, first, in the impossibility of his receiving or effecting any change in his essence; secondly, in the *certainty* that his designs, though not unalterable, will nevertheless be never altered: it is grounded on the extreme perfection and independence of his nature, and on the excellence of the choice he has already made. His decrees, however, as far as they are still executory, having been freely passed, are still free; for no past instant is assignable in which they were necessary, and consequently they are still alterable, though it is certain they will never be altered; just as future contingent events will certainly happen, though it be always possible, antecedently to their happening, that they will not happen, otherwise they would not be contingent, but necessary.

1000. Though men may be at one time objects of Divine favour, and at another time of punishment, this argues no change in the Divine decrees, as these decrees relating to different times eternally co-existed.

1001. Hence prayers are not useless; for if their object be compatible with a superior advantage to that which they demand, we may expect

expect from the Divine benignity that regard was had to them in the decree for the original arrangement of all events.

SECT. II.

OF THE MORAL ATTRIBUTES OF THE SUPREME BEING.

1002. Under this name we comprehend the dispositions of the Supreme Being towards his creatures: chiefly his goodness and justice.

1003. These attributes are such dispositions as we find and approve of in ourselves, removing from them all that springs from the imperfection of our nature, and extending them to the degree suited to his nature; that is, to infinity.

1004. *Divine goodness*, simply considered, consists in the disposition, or the actual communication of happiness; or, if the nature of the creatures require it, in affording them the means of acquiring it.

1005. To seek for proofs that this disposition exists in God, is perfectly idle, as not a
single

single pleasing sensation or sentiment can exist in our minds which we do not entirely owe to his beneficence; it is only through the laws he has gratuitously established, that we can obtain any; of ourselves we can procure none. Why evil of any kind was permitted to exist, we have already shewn, N^o 979, 980. 983, &c.

1006. It is said, that human life is attended with far more pain than pleasure: if it were so, I would not think such a state inexplicable, on the grounds already mentioned. A state of absolute happiness is incompatible with a state of probation: but I am inclined to think, that if all our moderate pleasures were balanced with the *inevitable* pains or uneasiness we endure, they would be found to outweigh them.

1007. Much of our uneasiness proceeds from comparisons with those whom we ignorantly suppose in a happier state; whereas a perfect compensation, both in pain and pleasure, in the different ranks of human life, generally takes place; and of those whom we suppose happier than ourselves, many are far more miserable. See Jenyns on Evil, p. 24. Paley's
Natural

Natural Theology, Chap. 26. Stew. Outlines, 287.

1008. As *love* consists in willing the happiness of the person loved, we must infer that God loves his creatures in the full and exact sense of the word.

1009. *Hatred* cannot exist in God, for it implies a pleasure in the suffering of the person hated; a pleasure inconsistent with the divine perfection, and with the love which God bears to his creatures: consequently *anger*, *revenge*, and other passions of the malignant kind, are ascribed to God only metaphorically; as his punishments, though in reality designed for the good of the sufferers, like parental chastisements, bear some resemblance to the effects those passions tend to produce.

1010. Even *pity*, or *compassion*, well defined by Dr. Cogan a benevolent sorrow at the sufferings of another, cannot exactly exist in the Divine mind, but merely analogically, including all that it implies of amiability, and excluding only every degree of pain.

1011. *Mercy*, as Dr. Cogan well remarks, is the most exalted branch of compassion; it particularly refers to that state of mind which induces

induces us to exercise our benevolence upon persons whose fate is at our disposal ; it induces us to relinquish demands which, if enforced to the utmost, would render us the immediate agents of misery : it is peculiarly applicable to unworthy or criminal behaviour to ourselves, which would involve the offender in distress, were we to be tenacious of our rights ; in a word, it is that dignified compassion, which induces us to suppress resentment, to pardon offences, or mitigate punishment as far as discretion may admit. The high approbation which we feel of this disposition, induces us to ascribe it to the Supreme Being, though he is incapable of resentment, and of receiving any offence. In him it consists in placing the transgressor in circumstances favourable to his amendment, inspiring him with sentiments fitted to promote it, and inflicting the punishment most likely to effect it, or omitting any for a certain time.

1012. Hence *forgiveness*, in the proper sense of the word (which is a pardon or remittance of the punishment due to offences), cannot be attributed to God ; but, as he acts in the same manner as men do when they pardon offences, it

it is by analogy ascribed to him; for language being formed to express human sentiments, the same terms are necessarily employed where the effects are similar to those which those sentiments exact or produce. By *repentance* men place themselves in a new situation, and do not require those punishments which their amendment would otherwise call for; yet they may still be subjected to pain, as a means of improvement in virtue and advancement in perfection.

Divine Justice.

1013. Of *justice* in general a definition has been given, N^o 909; of its various branches, the remunerative, preventive, and corrective are necessarily attributed to the Supreme Being; for as they imply no imperfection, and their exercise, even by earthly sovereigns, meets our highest approbation, we must conclude, that the Sovereign of the universe, the most perfect of all Beings, exercises them in the most perfect manner; and in fact justice is nothing more than goodness, under the direction of wisdom.

1014. Hence, even in this life, for the encouragement

couragement of virtue, and the discouragement of vice, each virtue meets with its proper reward, and each vice with its proper punishment; thus temperance is rewarded by health; justice by confidence, credit and esteem; humanity, liberality, and generosity with love, regard, and frequently with ample recompence: and, on the contrary, fraud, falsehood, and brutality, meet with scorn and abhorrence; the more atrocious crimes scarce ever escape legal penalties.

1015. Even delinquencies of a nature to evade human laws, or committed by those who are above their reach, never fail of receiving an adequate requital, though not always visibly, in mental anguish, and the horrors of remorse; the sufferings of many have been so dreadful as to compel them to end them with their lives; they are well depicted by Tiberius, in his letter to the Roman senate, and were evidently experienced by those moral monsters Nero, Domitian, Elizabeth, Cromwell, Philip the III^d. and many more.

1016. But *vindictive justice* cannot with propriety be ascribed to the Supreme Being: it proceeds from resentment, and consists in
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the malignant satisfaction of retaliating on the offender the pain he has given to the offended. Now of resentment, or feeling any pain, God is totally incapable; consequently the sentiments which men feel on such occasions, and the moral fitness of punishment for the gratification of resentment, exists only with respect to them, but cannot with any appearance of reason be deemed to take place with respect to a Being who is incapable of being either offended or injured, in the proper sense of those words, as all must confess.

1017. Nor can such punishment be requisite, as some pretend, for the purpose of government, since punishment in that precise view is at present invisible; as far as it is visible, it is with much more propriety attributable to the purposes of correction, discipline, or example.

1018. *Vivacity* in his revelations, and *fidelity* in performing his promises, may be considered as branches of justice, and meet with our highest approbation; they are therefore necessarily ascribed to the Supreme Being. But *fidelity* in executing his menaces, where their

execution can with propriety be dispensed with, is incompatible with his mercy.

CHAPTER. III.

OF DIVINE PROVIDENCE.

1019. By providence I understand the original arrangement of events, partly ordained and partly permitted, by the Supreme Being, for the purpose of producing the greatest possible quantity of moral and physical good.

1020. This arrangement is maintained and effected by the immediate agency of the Supreme Being himself, either singly or in co-operation with the powers he has granted to free agents.

1021. This agency is carried on by general laws, which universally take place; such as those of gravitation, cohesion, elasticity percussion, &c.: independently of the certainty of their efficiency, arising from their constancy, men would not know how to act, on any occasion; no arts or sciences could exist. The constancy of the effects produced is therefore

fore a full proof of the existence of those laws, even where the detail of their operation cannot be exactly traced; in consequence of these, we find the same inclinations, passions, and intelligence, though with much variation of degree, in far the greater part of the human species, when placed in similar circumstances; and the same modes of action in animals and vegetables, varied and modified by the peculiarities of their different species.

1022. As prayer often apparently tends to obstruct or counteract the operation of these laws, theologians have been much embarrassed in endeavouring to reconcile its efficacy with their immutability. Some have supposed the interference of unembodied spirits;* a scheme evidently too wild and romantic to gain any credit: others have imagined the interference of secret influences on the minds of men, on particular occasions, which induce them to alter the line of conduct they would otherwise follow;† and even grant, contrary to the experience of mankind, that even the

* 5 Search, 124. Price, Dissert. 80.

† Ibid, 13. 15. 63. 77.

efficacy of natural causes may be altered or suspended by prayer.* The only argument which the ablest assertor of those influences adduces, is, that we are ignorant of the manner in which ideas arise in our minds, and of the causes on which the succession of them depends, yet both depend on general laws, particularly on those of association, well explained by Hume, and Mr. Dugald Stewart, p. 278, in 8vo. See also ante, chap. v. sec. 4.

1023. The existence of such occasional influences, of which we are not conscious, seem to me for that reason purely fictitious and being contrary to the common course of nature, did they exist, must be thought miraculous. If any one could succeed in proving the existence of such influences, certainly it was that most discerning of all metaphysicians, Bishop Berkeley, who attempts to account for that particular influence called *grace*. He contends, that as we allow the existence of *force*, though we cannot form any idea of it, we should not deny the existence of *grace*, though we can form no idea of it. But in this case he was evidently biased by

* 5 Search, 207. 219.

the prejudices of his profession. The late excellent Dr. Priestley, much freer from all prejudice (though unfortunately still retaining a Calvinistic feature, as appears by his Essay on Necessity) has clearly shewn, in his sermon on Divine Influence, that it has no foundation in the Holy Scripture; and that the doctrine that admits it is pregnant with much mischief.

1024. Besides, though we have no idea of force, yet we have a notion of it, for it means no more than the degree in which power is applied. Berkeley, in this particular point, is well refuted, even by a much inferior metaphysician, Lord Bolingbroke. He thinks, and not very improperly, that “the word
 “ *force* serves as a sign of the unknown causes
 “ of the phenomena both of nature and of
 “ art. When we employ the word alone,
 “ it is of very vague signification, and im-
 “ ports nothing but some determining power,
 “ either intellectual or corporeal.” (Essay I. p. 173. 8vo.) “The possibility of believing
 “ force is nothing more than the possibility
 “ of believing, that every effect has a cause,
 “ though that cause be unknown to us; the
 disparity

“ disparity and impropriety of comparing it
 “ with grace do not arise from our having no
 “ idea of grace, for we have none of force ;
 “ but they arise from hence, that there is not
 “ the same possibility of believing the exist-
 “ ence of a cause, whereof we have no idea,
 “ and which cannot be ascertained by its ef-
 “ fects, as there is of believing one whereof
 “ we have no idea indeed, but whose exist-
 “ ence may be ascertained by its effects.”

1025. The efficacy of prayer, to which both reason and revelation oblige us to have recourse, may in my opinion be easily explained in the following manner.

1026. We must suppose the whole course of events, from the origin of things to their final determination, to be connected with and depend on the operation of the set of occasional causes that were first put in action, and their operation to be so conducted as to produce that series of subsequent events that were and are either ordained or permitted and effected, in consequence of the choice of the human will ; and that these events were originally so planned, as to harmonize with the prayers of
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the faithful, if their requests were consistent with the greater good of the whole.

1072. This will appear more plainly, in explaining the difficulties proposed by Dr. Fiddes: “ if (says he) one should pray to be
 “ delivered from some infectious distemper,
 “ the vapour whereby it is propagated will
 “ nevertheless follow its natural course.” True, but the preceding series of causes productive of its natural course, may, from regard to the foreseen prayer, be different from what they otherwise might be ; and consequently the course of the vapour, though still natural, may be such as to coincide with the request of the prayer.

1082. Again he adds, “ should a man in
 “ the heat of battle pray for protection from
 “ the instruments of death, which fly every
 “ where about him, yet a ball from a cannon
 “ or musket, will necessarily pursue the line
 “ of its direction ; it depends however on
 “ the choice of man, whether he will give it
 “ such particular direction, as by its natural
 “ tendency will take away the life of the per-
 “ son who deprecates the danger, and in this
 “ case

“ case (he thinks) it is impossible, upon any
 “ foresight of his prayer, that the order of
 “ causes, that are in themselves arbitrary, and
 “ of uncertain determination, should be dis-
 “ posed in such a manner as should certainly
 “ produce the effect desired of them.”

But this is a mistake; arbitrary causes are not of *uncertain* determination; what their future determination will be, is foreseen with certainty; see N° 955, &c.: and from the foreknowledge of the prayer, the original arrangement may be that in which a different determination of the direction of the bullet, or a different position of the person praying from the line of its direction, may take place.

1029. But it is said, we should never pray for miracles; thus we never pray for the restoration of a dead man to life. Now, the abatement of a storm, or the recovery of a sick person, are as truly miraculous as the restoration of a dead man to life, therefore prayers for such events are equally fruitless. This is a fallacious argument; for no natural cause can effect restoration to life; whereas many can effect an abatement of a storm,

storm, or the recovery of a sick man. The first would be miraculous, the latter not, unless instantaneous, as those recorded in our sacred books.

1030. Particular interpositions of the Supreme Being, by deviations from the established course of nature, frequently occur in the books of the Old and New Testament; but all were visible, all tended to effect purposes which could not be well answered without them.

1031. That famine, pestilence, and earthquakes, are ordered for the punishment of cities or countries, seems to me a great mistake, and evidently refuted Luke xiii. 1, 2: such events commonly arise from natural causes, and have very rarely been miraculous; as the deluge, and possibly the destruction of Sodom and Gomorrah. The destruction of Jerusalem was in no respect miraculous.

1032. The conduct of Providence, with respect to individuals, and in respect to states is very different. It frequently allows the most undeserving individuals to enjoy, at least apparently, the most enviable prosperity: for their existence is not confined to the

may meet with due punishment in the next :
 but it is otherwise of states, for as they do not
 survive this life, they meet with the reward
 of their virtues, and the punishments of their
 vices, or crimes, in the present state of their
 existence. Evident traces of these dispensa-
 tions of providence occur in the histories of
 Persia, Greece, Rome, &c.

